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(71) Applicants *(for all designated States except US)*: **ASTEX TECHNOLOGY LTD** [GB/GB]; 250 Cambridge Science Park, Milton Road, Cambridge, Cambridgeshire CB4 0WE (GB). **JANSSEN PHARMACEUTICA NV** [BE/BE]; Turnhoutseweg 30, B-2340 Beerse (BE).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **YON, Jeff** [GB/GB]; Astex Technology Ltd, 250 Cambridge Science Park, Milton Road, Cambridge, Cambridgeshire CB4 0WE (GB). **CLEASBY, Anne** [GB/GB]; Astex Technology Ltd, 250 Cambridge Science Park, Milton Road, Cambridge, Cambridgeshire CB4 0WE (GB). **BRUINZEEL, Wouter, David** [NL/BE]; Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **MASURE, Stefan, Leo, Jozef** [BE/BE]; Janssen Pharmaceutica NV, Turnhoutseweg 30, B-2340 Beerse (BE). **TICKLE, Ian** [GB/GB]; Astex Technology Ltd, 250 Cambridge Science Park, Milton Road, Cambridge, Cambridgeshire CB4 0WE (GB). **SHARFF, Andrew** [GB/GB]; Astex Technology Ltd, 250 Cambridge Science Park, Milton Road, Cambridge, Cambridgeshire CB4 0WE (GB).

(74) Agents: **BALDOCK, Sharon, Claire** et al.; Boult Wade Tennant, 70 Gray's Inn Road, London WC1X 8BT (GB).

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(54) Title: NOVEL BACE PROTEINS, NUCLEIC ACID MOLECULES THEREFOR, NOVEL CRYSTAL STRUCTURE OF NOVEL BACE PROTEINS, AND METHODS FOR MAKING AND USING

(57) Abstract: Disclosed and claimed are novel BACE proteins, crystal structures thereof, nucleic acid molecules therefor, and methods for making and using and uses of the same, especially for ascertaining inhibitors of BACE; and thus, disclosed and claimed too are inhibitors of BACE and methods of making and using the same.

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TITLE OF THE INVENTION

NOVEL BACE PROTEINS, NUCLEIC ACID MOLECULES THEREFOR, NOVEL CRYSTAL STRUCTURE OF NOVEL BACE PROTEINS, AND METHODS FOR MAKING AND USING

FIELD OF THE INVENTION

This invention relates generally to structural studies of the soluble Beta-site APP cleaving enzyme (BACE) catalytic domain (e.g., the aspartyl protease domains of BACE) and the corresponding structural information obtained by X-ray crystallography.

Moreover, the present invention relates to any one or more of:

A catalytic domain of BACE, or a form of BACE that is suitable for crystallization with the correct disulphide bonding that eliminates the need for refolding and/or apo-BACE crystals which are BACE crystals with no ligand bound, regardless of the source of the BACE) and/or apo-BACE crystals which are capable of being soaked with ligand to give complexes and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2) and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing;

Apo-BACE crystals that can be soaked, e.g., with ligands such as inhibitory or modulatory ligands, to give complexes, such as protein-ligand complexes;

A crystalline form of BACE or a BACE that has an active site containing one or more ligands other than the natural substrate or the substrate that occurs naturally or physiologically within the active site or apo-BACE crystals with no ligand bound, regardless of the source of the BACE; for instance, for use in rational drug design, as well as methods for ligand screening and design by X-ray crystallography;

BACE proteins comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain, advantageously amino acid sequences that crystallize to the crystalline structure or a structure that mimics the crystalline structure (included in the term "BACE proteins") - such as those, when compared with other BACE proteins (such as Genbank accession P56817) have one or more of : a mutation at amino acid ("aa") 153 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 172 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 223 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 354 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and one or more truncations (e.g., a BACE extending from Thr 22 to Ser 453) - whereby such proteins can also optionally include one or more of: a tag such as a His tag (e.g., a HIS_6 tag) for instance to facilitate purification; a non-BACE signal sequence to facilitate or increase secretion of the protein into cell culture medium such as a baculovirus signal sequence for example the baculovirus gp67 signal sequence; and a tag such as a FLAG tag to allow differentiation of species arising from incomplete pro-peptide cleavage (and separation if required);

BACE proteins that have one or more mutations to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals, such as with reference to Genbank accession P56817: a mutation at amino acid ("aa") 153 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 172 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 223 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 354 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and one or more truncations (e.g., a BACE extending from Thr 22 to Ser 453);

BACE proteins that include one or more of: a tag such as a His tag (e.g., a HIS_6 tag) for instance to facilitate purification; a non-BACE signal sequence to facilitate or increase secretion of

the protein into cell culture medium such as a baculovirus signal sequence for example the baculovirus gp67 signal sequence; and a tag such as a FLAG tag to allow differentiation of species arising from incomplete pro-peptide cleavage (and separation if required);

One or more nucleic acid molecules (e.g., an isolated nucleic acid molecule) encoding the BACE proteins or at least a functional portion thereof including any of the foregoing proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain, advantageously amino acid sequences that crystallize to the crystalline structure or a structure that mimics the crystalline structure including those having reduced GC content via silent mutations from nucleotide sequences derived from wild-type BACE that would also encode the foregoing;

Vectors or cells (e.g., viral vectors such as baculovirus, bacterial vectors such as *E. coli*, mammalian cells such as CHO cells, or DNA plasmids) containing and/or expressing any one or more of the nucleic acid molecules and/or BACE proteins – the latter can include prior BACE proteins especially when there is co-expression thereof with a gene product - an enhancer - that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein such as an enzyme, for instance a convertase or a transcription enhancer or a translation enhancer or both a transcription and translation enhancer, for instance a prohormone convertase such as the prohormone convertase furin especially when the vector or cell system is baculovirus and/or insect cells, and thus also vectors or cells containing and/or expressing the nucleic acid molecules and/or BACE proteins and a nucleic acid molecule encoding the enhancer as well as kits containing separately packaged isolated nucleic acid molecules for such co-expression, e.g., a kit containing separately packaged nucleic acid molecules comprising (i) a BACE-protein encoding nucleic acid molecule and (ii) a nucleic acid molecule encoding the enhancer, for use in vectors or cells for the co-expression thereof;

Expression through or by vectors or cells of that which is encoded by the nucleic acid molecules and/or contained in the aforementioned vectors or cells and/or of the gene products and/or the amino acid sequences and/or the BACE proteins, including co-expression thereof, or of other nucleic acid molecules encoding BACE proteins, with a gene product that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein such as an enzyme, e.g., a convertase, for instance a prohormone convertase such

as the prohormone convertase furin especially when the vector or cell system is baculovirus and/or insect cells;

Methods for crystallizing BACE proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain;

Methods for determining the crystal structure of BACE proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain;

Uses of that which is encoded by the nucleic acid molecules and/or the gene products and/or the amino acid sequences and/or the BACE proteins, for instance in screening assays such as drug or patient screening assays or in generating products therefor (such as for generating antibodies to the catalytic domain and/or to BACE proteins which are useful in such assays), as well as such assays and products therefor, and uses of the nucleic acid molecules, vectors or cells, methods and/or the aforementioned expression via vectors or cells, for preparing such uses or assays and/or components for such uses or assays;

Products from such assays ("assay products"), as well as uses of the nucleic acid molecules, vectors or cells, methods and/or the aforementioned expression via vectors or cells for preparing such assay products and/or components for such assay products;

Inhibitors or modulators of BACE and/or inhibitors or modulators of the production of Aβ or fragments thereof, for instance, such inhibitors or modulators as determined through the assays of the present invention and/or through contact with and binding to or otherwise inhibiting or modulating BACE proteins of the present invention, such as a compound or composition which binds to and/or inhibits and/or modulates and/or interacts with a form of BACE that is suitable for crystallization with the correct disulphide bonding that eliminates the need for refolding and/or having an unoccupied or substantially unoccupied active site and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of

BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2) and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing (excluding, of course, prior known inhibitors, modulators, if any, of BACE and/or inhibitors, modulators of the production of Aβ or fragments thereof);

Uses of such assay products and/or inhibitors and/or modulators, for instance in treating maladies, conditions, diseases and the like such as Alzheimer's disease (AD) involving BACE activity and/or Aβ or fragments thereof and/or in formulating medicaments for such treatments, as well as of uses of the nucleic acid molecules, vectors or cells, the methods and/or the aforementioned expression via vectors or cells, for such treatment and/or a component thereof and/or for preparing such medicaments and/or a component thereof, such that methods for preparing such medicaments including use of any of the foregoing is included, *inter alia*.

And a data storage medium encoded with the structural co-ordinates of crystallized BACE or at least a functional portion thereof. Such data storage material is capable of displaying such structures, or their structural homologues, as a graphical three-dimensional representation on a computer screen. This invention also relates to methods of using the structure co-ordinates to solve the structure of similar or homologous proteins or protein complexes. In addition, this invention relates to methods of using structure co-ordinates to screen and design compounds, including inhibitory compounds, that bind to BACE or homologues thereof. The present invention also relates to compositions and crystals of BACE in complex with a BACE inhibitor. *Cf.* WO 01/37194.

Various documents are cited in this text. Citations in the text can be by way of a citation to a document in the reference list, e.g., by way of author(s) and document year citation to a document listed in the reference list, or by full citation in the text to a document that may or may not also be listed in the reference list.

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All documents cited in this text ("herein cited documents") and all documents cited or referenced in herein cited documents are hereby incorporated herein by reference. Likewise, teachings of herein cited documents and documents cited in herein cited documents can be employed in the practice and utilities of the present invention.

BACKGROUND OF THE INVENTION

Alzheimer's disease (AD) is estimated to afflict more than 20 million people worldwide and is believed to be the most common form of dementia (Newsday (New York), Friday, July 6, 2001, City Edition, page A24). AD is a progressive dementia characterized by amyloid plaques and intracellular neurofibrillary tangles that accumulate in the brain and are thought to be responsible for the mental decline in Alzheimer's patients.

Beta-amyloid protein (Aβ) is the major constituent of the amyloid plaques, which are characteristic of AD (De Strooper and Konig, 1999).

Aβ is a 39-42 amino acid residue peptide formed by the specific cleavage of a class I transmembrane protein called the amyloid precursor protein (APP) by two proteases, β- and γ-secretase (the Aβ fragment).

β-secretase cleaves APP between residues Met671 and Asp672 (numbering corresponds to the 770 amino acid isoform of APP) to form the N-terminus of Aβ. A second cleavage of the peptide is associated with γ-secretase to form the C-terminus of the Aβ peptide. β and γ-secretases cleave the amino and carboxy terminal ends of the Aβ domain, respectively. A third enzyme, α-secretase, has recently been identified which cleaves APP within the Aβ domain between residues 16 and 17 of the Aβ fragment (Howlett et al., 2000).

The therapeutic potential of inhibiting and/or modulating the deposition of Aβ has motivated many groups to isolate and characterize secretase enzymes and to identify their potential inhibitors (*see, e.g.*, WO01/23533 A2, EP0855444A2,WO00/17369, WO00/58479, WO00/47618, WO01/00665; WO01/00663; U.S. Patent No. 6,245,884 (Hook), U.S. Patent No. 6,221,667 (Reiner et al.), U.S. Patent No. 6,211,235 (Wu et al.)). Indeed, it also has been reported in the popular press that "[d]rug makers are studying medicines called gamma-secretase inhibitors, which aim to block the cleavage process" (Newsday (New York), Friday, July 6, 2001, City Edition, page A24).

Consequently, a number of potential candidates for these enzymes have recently been reported in the literature: Several groups have identified and isolated aspartate proteases that have

β-secretase activity (Hussain et al., 1999; Lin et. al, 2000; Yan et. al, 1999; Sinha et. al., 1999 and Vassar et. al., 1999). β-secretase is also known in the literature as Asp2 (Yan et. al, 1999), Beta site APP Cleaving Enzyme (BACE) (Vassar et. al., 1999) or memapsin-2 (Lin et al., 2000).

BACE was identified using a number of experimental approaches such as EST database analysis (Hussain et al. 1999); expression cloning (Vassar et al. 1999); identification of human homologs from public databases of predicted *C. elegans* proteins (Yan et al. 1999) and finally utilizing an inhibitor to purify the protein from human brain (Sinha et al. 1999). Thus, five groups employing three different experimental approaches has led to the identification of the same enzyme, making a strong case that BACE is a β-secretase. Mention is also made of the patent literature: WO91/13904, EP518955, EP732399, WO92/03542, WO92/07068, WO96/40885, EP87/1720, U.S. Patents Nos. 5,942,400 and 5,744,346, EP855444, EP1037977, WO00/17369, WO01/23533, WO0047618, WO00/58479, WO01/00663, WO01/00665, EP848062, U.S. Patents Nos. 6,025,180 and 6,162,639, EP1047788 and WO99/33963, WO99/46281, WO98/11236, U.S. Patent No. 5,942,400 and WO94/13319.

Indeed, BACE is a membrane bound protein which is synthesized as a partially active proenzyme, and is most abundantly expressed in brain tissue. It is thought to represent the major β-secretase activity.

BACE activity may be considered to be a rate-limiting step in the production of Aβ. This makes BACE of special interest in the pathology of Alzheimer's disease and other maladies that involve Aβ, or fragments thereof (e.g., amyloid plaques and amyloid angiopathy also characterize the brains of individuals with Trisomy 21 or Down's Syndrome, Hereditary Cerebral Hemorrhage with Amyloidosis of the Dutch Type (HCHWA-D), *inter alia*; *see also* U.S. Patent No. 6,211,235), and therefore an important candidate for the development of drugs as a treatment against Alzheimer's disease and/or against such other maladies.

Furthermore, as reported in the popular press, Newsday (New York), Friday, July 6, 2001, City Edition, page A24, that day's edition of Science includes *in vitro* findings by investigator Thomas Sudhof of the Howard Hughes Medical Institute which suggest that gamma secretase may be implicated in another function, but that it is not known if those findings apply to humans or which genes may be involved. Nonetheless, inhibiting gamma secretase may have issues which are addressed by the present invention involving inhibiting BACE the production of Aβ or fragments thereof.

The likelihood of developing Alzheimer's disease increases with age, and as the aging population of the world increases, this disease may become a greater and greater problem. In addition, there is a familial link to AD and consequently any individuals possessing the double mutation of APP known as the Swedish mutation (in which the mutated APP forms a considerably improved substrate for BACE) have a much greater chance of developing AD and also of developing it at an early age (*see also* U.S. Patent No. 6,245,964 pertaining to transgenic rodent comprising APP-Swedish).

It would therefore be useful to inhibit and/or modulate the deposition of Aβ and portions thereof; for instance by inhibiting and/or modulating BACE proteins through inhibitors or modulators thereof ascertained from BACE proteins having a particular crystal structure or having a structure as herein set forth.

Hence, drugs that reduce or block BACE activity would reduce Aβ levels and levels of fragments of Aβ in the brain or elsewhere where Aβ or fragments thereof deposit and thus slow the formation of amyloid plaques and the progression of AD or other maladies involving deposition of Aβ or fragments thereof (Yankner, 1996; De Strooper and Konig, 1999).

Further, reaction systems comprising Beta secretase have been asserted to be useful in screening assays, e.g., to identify inhibitors or modulators and antibodies raised against Beta-secretase have been asserted to be useful for screening and other assays; *see, e.g.,* U.S. Patent No. 6,221,645 and other documents cited herein; and thus, the present invention is likewise useful in such assays in generating antibodies.

There has been the production of certain active recombinant BACEs - different from those of the herein invention - using heterologous expression systems for mammalian cells (Vassar et al, 1999, Hassain et al, 1999), insect cells (Mallender et al, 2001) and bacterial cells (Lin et al 2000). While the production of these BACEs shows that no undue experimentation is needed to practice the present invention, these prior systems had deficiencies addressed by the herein invention.

Indeed, prior to the present invention there was a need to produce a soluble recombinant BACE protein with an improved crystal structure that is suitable for crystallization with the correct disulphide bonding that eliminates the need for refolding and/or having an unoccupied or substantially unoccupied active site and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard

deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2), as well as amino acid sequences therefor, nucleic acid molecules encoding them, and other aspects of the present invention as herein discussed.

In addition, the study of crystal structure and symmetry is developed (*See, e.g.,* Cotton and Wilkinson, Inorganic Chemistry (John Wiley & Sons, Fourth Ed. 1980), especially Ch. 2). X-ray crystallography, or more generally crystallography, is an established, well-studied technique that provides what can best be described as a three-dimensional picture of what a molecule looks like in a crystal, and is useful for determining whether a compound that is not a known ligand of a target biomolecule can indeed bind as a ligand to a target biomolecule (*see, e.g.,* WO 99/45379; U.S. Patent No. 6,087,478; U.S. Patent No. 6,110,672); and, there are additional techniques for identifying drug cores (*see, e.g.,* WO 98/57155 regarding fragment-based screening). Mention is also made of U.S. Patents Nos. 6,128,582, 6,153,579, 6,077,682, and 6,037,117 and PCT publications WO01/37194 and WO00/47763 for additional information on aspects of structure-based drug design and homology modelling.

These techniques can be employed with the herein disclosed BACE crystals and proteins, especially those that are without any ligands typically found in wild-type BACE, to rationally design compounds that inhibit or modulate, e.g., bind to or interact with BACE; and, the use of these techniques, in combination with herein disclosed BACE crystals and proteins it is believed has not been heretofore taught or suggested in the art.

OBJECTS AND SUMMARY OF THE INVENTION

Without excluding inventions otherwise herein disclosed, the present invention can provide one or more of the following embodiments.

The present invention in an embodiment provides a catalytic domain of BACE, such as a form of BACE that is suitable for crystallization with the correct disulphide bonding that eliminates

the need for refolding and/or a BACE protein having an unoccupied or substantially unoccupied active site (apo-BACE crystals with no ligand bound, regardless of the source of the BACE) and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å or 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2) and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having a space group transition from C2 to $P2_1$ together with an increase in the number of copies of the molecule in the asymmetric unit, while the cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 crystal form, on soaking the apo-BACE crystal with a ligand.

The present invention likewise provides apo-BACE crystals that can be soaked, e.g., with ligands such as inhibitory or modulatory ligands, to give complexes, such as protein-ligand complexes.

The present invention in another embodiment provides a crystalline form of BACE or a BACE that has an active site containing one or more ligands other than the natural substrate or the substrate that occurs naturally or physiologically within the active site or apo-BACE crystals with no ligand bound, regardless of the source of the BACE; for instance, for use in rational drug design, as well as methods for ligand screening and design by X-ray crystallography.

In regard to this, the invention further provides a method for ligand screening and/or design, e.g., by X-ray crystallography and/or nuclear magnetic resonance (NMR). The method can include exposing the apo crystals or BACE crystals with no ligand bound (i.e., with an unoccupied active site, regardless of the source of the BACE) to one or more test samples, and determining whether a ligand-BACE complex is formed, e.g., obtaining an X-ray crystal diffraction pattern to

determine whether a ligand-BACE complex is formed or using NMR to determine whether such a complex is formed. The BACE can be exposed to the test samples by either co-crystallizing the BACE in the presence of the one or more test samples or soaking the BACE in a solution of one or more test samples. Structural information from ligand-BACE complexes can be used to design ligands that bind tighter, that bind more specifically, that have better biological activity or have a better safety profile. *Cf.* WO99/45379.

The present invention thus further provides a computer-assisted method for identifying or designing potential ligands to fit within the catalytic domain of BACE, using a programmed computer comprising a processor, a data storage system, an input device, and an output device, comprising the steps of: (a) inputting into the programmed computer through said input device data comprising the three-dimensional co-ordinates of a subset of the atoms in the BACE catalytic domain, e.g., BACE protein as herein provided and/or such information with structural information from ligand-BACE complexes, thereby generating a data set; (b) comparing, using said processor, said data set to a computer database of chemical structures stored in said computer data storage system; (c) selecting from said database, using computer methods, chemical structures having a portion that is structurally complementary to said data set; (d) optionally constructing, using computer methods, a model of a chemical structure having a portion that is structurally complementary to said data set and (e) outputting to said output device the selected chemical structures having a portion complementary to said data set; and optionally synthesizing one or more of the selected chemical structures; and further optionally contacting said synthesized selected chemical structure with BACE to ascertain whether said synthesized chemical structure is a ligand that fits within the catalytic domain of BACE and/or inhibits or modulates or interacts with BACE. *Cf.* U.S. Patent No. 5,835,382.

In this way, one can rationally identify and/or design inhibitors or modulators of BACE or compounds that interact with BACE. And, in this regard, mention is made that the skilled artisan can employ the products found in the wild-type BACE catalytic domain as a portion of the information to be inputted or employed in the rational design and/or identification of inhibitors or modulators of BACE or compounds that interact with BACE. Furthermore, an inhibitor of BACE can be competitive, non-competitive, uncompetitive, or irreversible; and, inhibitors of BACE are of significant technical and commercial interest.

The present invention also provides BACE proteins comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain, advantageously amino acid sequences that crystallize to the crystalline structure or a structure that mimics the crystalline structure (included in the term "BACE proteins") - such as those, when compared with other BACE proteins (such as Genbank accession P56817) have one or more of : a mutation at amino acid ("aa") 153 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 172 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 223 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, a mutation at aa 354 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and one or more truncations (e.g., a BACE extending from Thr 22 to Ser 453) - whereby such proteins can also optionally include one or more of: a tag such as a His tag (e.g., a HIS_6 tag) for instance to facilitate purification (*cf.* U.S. Patent No. 6,020,143); a non-BACE signal sequence to facilitate or increase secretion of the protein into cell culture medium such as a baculovirus signal sequence for example the baculovirus gp67 signal sequence (*cf.* U.S. Patents Nos. 6,245,532, 5,516,657); and a tag such as a HA or FLAG tag to allow differentiation of species arising from incomplete pro-peptide cleavage (and separation if required) (*cf.* U.S. Patents Nos. 6,190,874, 6,083,732).

The present invention thus further provides BACE proteins that have one or more mutations to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals, such as with reference to Genbank accession P56817: a mutation at amino acid ("aa") 153 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 172 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 223 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as asparagine to glutamine, and/or a mutation at aa 354 for instance to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals such as

asparagine to glutamine, and one or more truncations (e.g., a BACE extending from Thr 22 to Ser 453).

Advantageously, the BACE protein has all four of the mutations and the truncation.

The present invention additionally provides BACE proteins that include one or more of: a tag such as a His tag (e.g., a HIS_6 tag) for instance to facilitate purification; a non-BACE signal sequence to facilitate or increase secretion of the protein into cell culture medium such as a baculovirus signal sequence for example the baculovirus gp67 signal sequence; and a tag such as a FLAG tag to allow differentiation of species arising from incomplete pro-peptide cleavage (and separation if required).

Even further still, the present invention provides one or more nucleic acid molecules (e.g., an isolated nucleic acid molecule) encoding the BACE proteins or at least a functional portion thereof including any of the foregoing proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain, advantageously amino acid sequences that crystallize to the crystalline structure or a structure that mimics the crystalline structure including those having reduced GC content via silent mutations from nucleotide sequences derived from wild-type BACE that would also encode the foregoing.

In yet further embodiments, the present invention provides vectors or cells (e.g., viral vectors such as baculovirus, bacterial vectors such as *E. coli*, mammalian cells such as CHO cells, or DNA plasmids) containing and/or expressing any one or more of the nucleic acid molecules and/or BACE proteins – the latter can include prior BACE proteins especially when there is co-expression thereof with a gene product - an enhancer - that enhances in the particular vector or cell system, the total amount of BACE produced and/or increases the fraction of processed protein such as an enzyme e.g., a convertase, or a transcription enhancer or a translation enhancer or both a transcription and translation enhancer (*cf.*. U.S. Patents Nos. 6,130,066, 6,004,777, 5,990,091), for instance a prohormone convertase such as the prohormone convertase furin (*cf.* Laprise et al. 1998) when the vector or cell system is baculovirus and/or insect cells, and thus also vectors or cells containing and/or expressing the nucleic acid molecules and/or BACE proteins and a nucleic acid molecule encoding the enhancer as well as kits containing separately packaged isolated nucleic acid molecules for such co-expression, e.g., a kit containing separately packaged nucleic acid molecules

comprising (i) a BACE-protein encoding nucleic acid molecule and (ii) a nucleic acid molecule encoding the enhancer, for use in vectors or cells for the co-expression thereof;

The invention thus also provides expression through or by vectors or cells of that which is encoded by the nucleic acid molecules and/or contained in the aforementioned vectors or cells and/or of the gene products and/or the amino acid sequences and/or the BACE proteins, including co-expression thereof, or of other nucleic acid molecules encoding BACE proteins, with a gene product that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein such as an enzyme, e.g., a convertase, for instance a prohormone convertase such as the prohormone convertase furin especially when the vector or cell system is baculovirus and/or insect cells.

As the invention involves a unique crystal structure of BACE, the invention provides methods for crystallizing BACE proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain.

Similarly, the invention provides methods for determining the crystal structure of BACE proteins and/or amino acid sequences and/or gene products comprising, containing, having, consisting essentially of and/or consisting of amino acid sequences of the catalytic domain.

The invention further contemplates uses of that which is encoded by the nucleic acid molecules and/or the gene products and/or the amino acid sequences and/or the BACE proteins, for instance in screening assays such as drug or patient screening assays or in generating products therefor (such as for generating antibodies to the catalytic domain and/or to BACE proteins which are useful in such assays), as well as such assays and products therefor, and uses of the nucleic acid molecules, vectors or cells, methods and/or the aforementioned expression via vectors or cells, for preparing such uses or assays and/or components for such uses or assays.

Included within the ambit of the present invention are products from such assays ("assay products"), as well as uses of the nucleic acid molecules, vectors or cells, methods and/or the aforementioned expression via vectors or cells for preparing such assay products and/or components for such assay products.

The BACE protein of the present invention may be employed in screening for compounds which inhibit or modulate or activate or interact with this protein. Such compounds may be identified from cells or cell fractions, mixtures of natural products or chemical libraries.

The assay may comprise mixing the BACE polypeptide of the invention with a candidate compound in solution and measuring BACE activity in the mixture. It may also be advantageous to measure binding of the compound to the BACE polypeptide (or competition with binding of a known inhibitor) instead of an effect on enzyme activity. Alternatively, versions of the BACE protein containing the transmembrane region may be expressed in cells, and these cells (or membranes prepared from these cells) may be incubated with candidate compounds. The effect on BACE activity may then be assessed by measurement of cleavage of a suitable substrate, either added to the mixture or co-expressed in the cells.

The protein or antibodies to the protein may also be used to identify receptors, through standard techniques. These include, but are not limited to, ligand binding or cross-linking assays in which the BACE protein is labeled and contacted with a source of the putative receptor, and biophysical techniques such as surface plasmon resonance.

The present invention even further contemplates inhibitors or modulators of BACE or compounds or compositions that interact with BACE and/or inhibitors or modulators of the production of Aβ or fragments thereof, for instance, such inhibitors as determined through the assays of the present invention and/or through contact with and binding to or otherwise interacting with, inhibiting or modulating BACE proteins of the present invention, such as a compound or composition or ligand which binds to and/or inhibits and/or interacts with and/or modulates a form of BACE that is suitable for crystallization with the correct disulphide bonding that eliminates the need for refolding and/or having an unoccupied or substantially unoccupied active site and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2)

and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing (excluding, of course, prior known inhibitors and modulators of BACE and/or inhibitors or modulators of the production of Aβ or fragments thereof).

And, the present invention provides uses of such assay products and/or inhibitors and/or modulators and/or ligands, and/or compositions or compounds that interact with BACE, for instance in treating maladies, conditions, diseases and the like such as Alzheimer's disease (AD) involving BACE activity and/or Aβ or fragments thereof and/or in formulating medicaments for such treatments, as well as of uses of the nucleic acid molecules, vectors or cells, the methods and/or the aforementioned expression via vectors or cells, for such treatment and/or a component thereof and/or for preparing such medicaments and/or a component thereof, such that methods for preparing such medicaments including use of any of the foregoing is included.

In a further embodiment, the present invention provides a Beta-site APP cleaving enzyme which comprises an amino acid sequence of SEQ ID NO: 5; advantageously, the amino acid sequence comprises a catalytic domain, and wherein the enzyme is in a crystalline form, such as herein defined.

In another embodiment the recombinant Beta-site APP cleaving enzyme comprises an amino acid sequence of SEQ ID NO: 5 (Figs. 1B, 2A, 8), as well as nucleic acid molecules encoding such an enzyme; for instance, a nucleic acid molecule comprising a sequence of SEQ ID NO: 4 or 10 (Figs. 1A, 2B, 7).

More in particular, with respect to the herein mentioned nucleic acid molecules and polypeptides therefrom, e.g., the aforementioned nucleic acid molecules (Figs. 2B, 7) and polypeptides expressed from them (Figs. 2A, 8), the invention further comprehends isolated and/or purified nucleic acid molecules and isolated and/or purified polypeptides having at least about 70%, preferably at least about 75% or about 77% identity or homology ("substantially homologous or identical"), advantageously at least about 80% or about 83%, such as at least about 85% or about 87% homology or identity ("significantly homologous or identical"), for instance at least about 90% or about 93% identity or homology ("highly homologous or identical"), more advantageously at least about 95%, e.g., at least about 97%, about 98%, about 99% or even about 100% identity or homology ("very highly homologous or identical" to "identical"; or from about 84-100% identity considered "highly conserved"); and advantageously these polypeptides obtain crystal structures as herein disclosed and the nucleic acid molecules encode polypeptides that obtain crystal structures

as herein disclosed. Moreover, it is advantageous that polypeptides of the invention have greater than 98.8% identity to herein disclosed sequences, and that nucleic acid molecules of the invention have greater than 95.6% identity to herein disclosed sequences, especially as certain amino acid sequences of the invention have 98.8% identity to sequence 32 of WO01/23533 and certain nucleic acid molecules of the invention have 95.6% identity to sequence 25 of WO01/23533 (and it is intended to exclude any prior sequences). The invention also comprehends that these nucleic acid molecules and polypeptides can be used in the same fashion as the herein or aforementioned nucleic acid molecules and polypeptides.

Nucleotide sequence homology can be determined using the "Align" program of Myers and Miller, ("Optimal Alignments in Linear Space", CABIOS *4*, 11-17, 1988, incorporated herein by reference) and available at NCBI. Alternatively or additionally, the term "homology" or "identity", for instance, with respect to a nucleotide or amino acid sequence, can indicate a quantitative measure of homology between two sequences. The percent sequence homology can be calculated as $(N_{ref} - N_{dif})*100/N_{ref}$, wherein N_{dif} is the total number of non-identical residues in the two sequences when aligned and wherein N_{ref} is the number of residues in one of the sequences. Hence, the DNA sequence AGTCAGTC will have a sequence similarity of 75% with the sequence AATCAATC ($N_{ref} = 8$; $N_{dif}=2$).

Alternatively or additionally, "homology" or "identity" with respect to sequences can refer to the number of positions with identical nucleotides or amino acids divided by the number of nucleotides or amino acids in the shorter of the two sequences wherein alignment of the two sequences can be determined in accordance with the Wilbur and Lipman algorithm (Wilbur and Lipman, 1983, PNAS, USA 80:726, incorporated herein by reference), for instance, using a window size of 20 nucleotides, a word length of 4 nucleotides, and a gap penalty of 4, and computer-assisted analysis and interpretation of the sequence data including alignment can be conveniently performed using commercially available programs (e.g., Intelligenetics ™ Suite, Intelligenetics Inc. CA). When RNA sequences are said to be similar, or have a degree of sequence identity or homology with DNA sequences, thymidine (T) in the DNA sequence is considered equal to uracil (U) in the RNA sequence (*see also* alignment used in Figures).

RNA sequences within the scope of the invention can be derived from DNA sequences, by thymidine (T) in the DNA sequence being considered equal to uracil (U) in RNA sequences.

Additionally or alternatively, amino acid sequence similarity or identity or homology can be determined using the BlastP program (Altschul *et al.*, Nucl. Acids Res. 25, 3389-3402 (1997), incorporated herein by reference) and available at NCBI. The following references (each incorporated herein by reference) provide algorithms for comparing the relative identity or homology of amino acid residues of two proteins, and additionally or alternatively with respect to the foregoing, the teachings in these references can be used for determining percent homology or identity: Needleman SB and Wunsch CD, "A general method applicable to the search for similarities in the amino acid sequences of two proteins," J. Mol. Biol. 48:444-453 (1970); Smith TF and Waterman MS, "Comparison of Bio-sequences," Advances in Applied Mathematics 2:482-489 (1981); Smith TF, Waterman MS and Sadler JR, "Statistical characterization of nucleic acid sequence functional domains," Nucleic Acids Res., 11:2205-2220 (1983); Feng DF and Dolittle RF, "Progressive sequence alignment as a prerequisite to correct phylogenetic trees," J. of Molec. Evol., 25:351-360 (1987); Higgins DG and Sharp PM, "Fast and sensitive multiple sequence alignment on a microcomputer," CABIOS, 5: 151-153 (1989); Thompson JD, Higgins DG and Gibson TJ, "ClusterW: improving the sensitivity of progressive multiple sequence alignment through sequence weighing, positions-specific gap penalties and weight matrix choice, Nucleic Acid Res., 22:4673-480 (1994); and, Devereux J, Haeberlie P and Smithies O, "A comprehensive set of sequence analysis program for the VAX," Nucl. Acids Res., 12: 387-395 (1984).

In this fashion, by comprehending nucleic acid molecules and polypeptides having such homology to the particular sequences disclosed, it is envisioned that the invention encompasses homologues to the disclosed sequences, within the herein terms.

As to homologues of the disclosed amino acid sequences (Figs 2A, 8), it is advantageous that these homologues have the herein defined crystal structure; and, as to homologues of the disclosed nucleic acid sequences, it is advantageous that these homologues encode BACE proteins having the herein defined crystal structure.

Furthermore, as to inventive nucleic acid molecules, the invention comprehends codon equivalent nucleic acid molecules. For instance, if the invention comprehends "X" protein having amino acid sequence "A" and nucleic acid molecule "N" encoding protein X, the invention comprehends nucleic acid molecules that also encode protein X via one or more different codons than in nucleic acid molecule N.

In addition, as to inventive nucleic acid molecules, the invention comprehends nucleic acid molecules that hybridize under stringent conditions to herein disclosed nucleic acid molecules.

As to herein disclosed amino acid sequences, the invention comprehends nucleic acid molecules encoding the herein disclosed amino acid sequences, as well as nucleic acid molecules that hybridize under stringent conditions to nucleic acid molecules encoding herein disclosed amino acid sequences, as these nucleic acid molecules that hybridize under stringent conditions to nucleic acid molecules encoding herein disclosed amino acid sequences can provide proteins having similarity, homology or identity as herein discussed, especially if the proteins have the same or substantially the same crystal structure as herein disclosed.

The present invention further provides in particular embodiments a crystalline structure of both the soluble BACE catalytic domain in the presence of OM99-2 and in the absence of OM99-2, both having a space group of C2 and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having a space group transition from C2 to $P2_1$ together with an increase in the number of copies of the molecule in the asymmetric unit, while the cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 crystal form, on soaking the apo-BACE crystal with a ligand The cell dimensions of the crystals grown in the presence of OM99-2 (Figure 3A) are a= 236.63Å, b= 105.02Å, and c= 62.59Å and β=101.32° and the asymmetric unit of the crystal containing three copies of BACE. The cell dimensions of the crystals grown in the absence of OM99-2 (Figure 3B) are a= 238.3Å, b= 107.4Å, and c= 60.4Å and β=101.89°. However, as is evident from the present disclosure, the invention is not limited by the crystals having been grown in the presence or absence of OM99-2 or anything else, and that cell dimensions can vary in all directions of the cell dimensions from a stated value, e.g., a stated cell dimension value can be that value ± standard deviation (0.2Å) or ± cell variability of 3Å, and that the stated beta angle can vary, e.g., a stated beta angle can be that value, for instance 101.32° or 101.89° or that value ± standard deviation (0.2°) or between 101° and 108°.

BACE crystals of the present invention can have a resolution better than, i.e., numerically lower than 3Å.

The present invention further provides a method of employing the crystals of the present invention in drug screening assays, comprising selecting a potential compound which binds to the active site of the BACE catalytic domain of BACE, as well as to uses of such a compound, as herein mentioned.

The present invention further provides a data storage medium encoded with the structural co-ordinates of crystallized BACE or at least a functional portion thereof. Such data storage material is capable of displaying such structures, or their structural homologues, as a graphical three-dimensional representation on a computer screen. This invention also relates to methods of using the structure co-ordinates to solve the structure of similar or homologous proteins or protein complexes. In addition, this invention relates to methods of using structure co-ordinates to screen and design compounds, including inhibitory compounds, that bind to BACE or homologues thereof. The present invention also relates to compositions and crystals of BACE in complex with a BACE inhibitor. *Cf.* WO 01/37194.

In this disclosure, "comprises," "comprising," "containing" and "having" and the like can have the meaning ascribed to them in U.S. Patent law and can mean "includes," "including," and the like; "consisting essentially of" or "consists essentially" likewise has the meaning ascribed in U.S. Patent law and the term is open-ended, allowing for the presence of more than that which is recited so long as basic or novel characteristics of that which is recited is not changed by the presence of more than that which is recited, but excludes prior art embodiments.

These and other embodiments are disclosed or are obvious from and encompassed by, the following Detailed Description.

BRIEF DESCRIPTION OF FIGURES

The following Detailed Description, given to describe the invention by way of example, but not intended to limit the invention to specific embodiments described, may be understood in conjunction with the accompanying Figures, incorporated herein by reference, in which:

Figure 1A shows an alignment of BACE DNA sequences (EMBL-AF190725.SEQ, EMBL-AF200343.SEQ, and EMBL-AF204943.SEQ), and a BACE DNA sequence of the present invention (BACE_dna.SEQ) (SEQ ID NOs: 1-4), illustrating the novelty, nonobviousness and inventive step of the present invention*, **;

Figure 1B shows an alignment of a BACE polypeptide sequence of the present invention (baceprot.pro) and a BACE polypeptide sequence (P56817.pro) (SEQ ID NOs: 5-6), illustrating the novelty, nonobviousness and inventive step of the present invention*, **;

Figure 2A shows an inventive BACE polypeptide sequence encoded by a BACE nucleotide sequence of the present invention (SEQ ID NO: 5);

Figure 2B shows an inventive BACE nucleotide sequence (SEQ ID NO: 4);

Figure 3A shows a photograph from a light microscope of the BACE crystal grown in the presence of OM99-2;

Figure 3B shows a photograph from a light microscope of the BACE crystal grown in the absence of any added inhibitor (OM99-2);

Figure 4A shows a diagram providing the arrangement of BACE monomers in asymmetric unit of crystallographic cell (The blue (molecule C) and orange (molecule B) molecules of the dimer, which is homologous to the dimer of Tang et al. WO01/00663, Tang et al.WO01/00665, Hong et al., Science, 2000; 290, 150-153; the molecule in pink (molecule A) forms a dimer with a crystallographically related molecule, which is homologous to the non-crystallographic dimer);

Figure 4B shows a diagram providing the packing of the molecules in the unit cell of BACE (The pink (C), orange (B) and blue molecules (A) form the asymmetric unit, which is related to the molecules in red (D), dark blue (E) and green (F) by crystallographic symmetry);

Figure 5 shows a copy of the gel from SDS-PAGE purification of BACE;

Figure 6 shows a diagrammatic representation of the comparison between the BACE protein of the present invention versus Tang et al. WO01/00663, Tang et al.WO01/00665, Hong et al., Science, 2000; 290, 150-153 (the downward facing arrows are the sites of proteolytic cleavage; TM is the transmembrane region and cyt is the cytoplasmic region), illustrating the novelty and nonobviousness and inventive step of the present invention;

Figure 7 shows an alignment of BACE DNA sequences (e.g., Ep855444.seq, WO0100663.SEQ, and WO0123533seq25.SEQ) and a BACE DNA sequence of the present invention (BACE_dna.SEQ) (SEQ ID NOs: 7-9 and 4), illustrating the novelty and nonobviousness and inventive step of the present invention*, ***;

Figure 8 shows an alignment of BACE amino acid sequences (e.g., WO0123533SEQ32.pro and WO0100663.PRO) and a BACE amino acid sequence of the present invention (baceprot.pro) (SEQ ID NOs: 10-11, and 5), illustrating the novelty and nonobviousness and inventive step of the present invention*, ***;

(* Figure color coded to show similarities and/or differences.)

(** EMBL-AF190725.SEQ, EMBL-AF200343.SEQ, and EMBL-AF204943.SEQ are EMBL sequences; P56817.pro is a Genbank sequence, accession P56817.)

(*** Ep855444.seq, WO0100663.SEQ, WO0123533seq25.SEQ, WO0123533SEQ32.pro and WO0100663.PRO are sequences from European Patent Application 855444, and PCT publications WO01/00663, WO01/23533, WO01/23533 and WO01/00663.)

DETAILED DESCRIPTION

The present invention involves a catalytic domain of BACE, or a form of BACE that is suitable for crystallization with the correct disulphide bonding. Correct disulphide bonding refers to the disulphide bonding of a biologically active conformation of a catalytic domain of BACE or a BACE protein that retains functionality. Having the correct disulphide bonding eliminates the need for refolding and/or a catalytic domain of BACE or a BACE protein having an unoccupied or substantially unoccupied active site (apo-BACE crystals with no ligand bound, regardless of the source of the BACE) and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme such as between about pH 5.6 and about pH 5.8 and/or having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± cell variability of 3Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± cell variability of 3Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± cell variability of 3Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE (e.g., from growth in the presence of OM99-2) or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± cell variability of 3Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± cell variability of 3Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± cell variability of 3Å and β=101.89° or 101.89° ± standard deviation (0.2°)or between 101° and 108° (e.g., from crystals grown in the absence of OM99-2) and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having a space group transition from C2 to $P2_1$ together with an increase in the number of copies of the molecule in the asymmetric unit, while the cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 crystal form, on soaking the apo-BACE crystal with a ligand.

The present invention further involves the expression of these BACE proteins and their use; for instance in the rational design or identification of inhibitors or modulators of BACE.

The BACE recombinant proteins of the present invention are advantageously expressed in insect cells through a baculovirus expression system and are soluble and lack glycosylation.

Increased solubility can be achieved by C-terminal truncation of the protein to remove the transmembrane and cytoplasmic regions, while glycosylation can be removed by introducing mutations at the glycosylation sites. WO01/00663 (Tang et al.), WO01/00665 (Tang et al.), Hong et al., Science, 2000; 290, 150-153, in contrast, produced the C-terminally truncated memapsin 2 protein in bacteria for crystallization. More specifically, memapsin 2 was produced as insoluble inclusion bodies in bacteria. Therefore refolding was necessary to give a soluble, active protein. However during refolding/purification the N-terminal region was lost, due to unidentified proteolytic activity. Furthermore the final protein used for crystallization studies was a mixture of species, the majority having an N-terminus at Leu41 and a minority at Leu43 (the mature N-terminus is at Glu46). See Table 4, *infra*, for a comparison of the Tang/Hong crystal structure with the present invention.

The exemplified BACE protein was expressed with: 1) a His_6 tag added at the C-terminus to facilitate purification; 2) mutations of the asparagine residue to glutamine in the four potential glycosylation sites at amino acids 153, 172, 223 and 354, to prevent glycosylation of the protein; 3) an N-terminus generated by furin cleavage; 4) a FLAG oligopeptide tag added to the N-terminus of the pro-peptide to enable differentiation between processed and unprocessed protein and 5) a signal peptide derived from the gp67 baculoviral protein.

Possible vectors for use in the present invention, e.g., for expressing BACE or a nucleic acid molecule encoding BACE, include, but are not limited to: for insect cells, pFastBAc1 (Life Technologies), pFastBAcDual pFastBAc1 (Life Technologies), pBlueBac III or pBlueBacHis baculovirus vectors (Invitrogen, San Diego, Calif.); for bacterial cells, pET-3 (Novagen, Madison, Wis.) and for mammalian cells, pJT4 (discussed further below), pcDNA-1 (Invitrogen, San Diego, Calif.) and pSV-SPORT 1 (Gibco-BRL, Gaithersburg, Md.). Thus, any suitable vector can be used for expression of the BACE catalytic domain or proteins or for replication and/or expression of nucleic acid molecules of the invention, including e.g., in bacterial systems such as *Escherichia coli*, or in viral vector systems, and DNA plasmid systems. The methods for making a vector or recombinant or plasmid for expression of BACE or nucleic acid molecules encoding BACE can be any desired method, e.g., a method which is by or analogous to the methods disclosed herein cited documents and/or in: U.S. Patent Nos. 4,603,112, 4,769,330, 5,174,993, 5,505,941, 5,338,683, 5,494,807, 4,722,848,. 4,745,051, 4,879,236, 5,762,939, 5,858,368, 6,224,882, 6,103,526, 4,769,331, 5,591,439, 5,552,143, 5,591,639, 5,589,466, 5,580,859, 6,130,066, 6,004,777,

5,990,091, and 6,156,567. However, baculovirus vector systems and insect cells are presently preferred.

The expression product generated by vectors or recombinants in this invention are advantageously isolated and/or purified from infected or transfected cells or culture medium.

The DNA sequence coding for the BACE catalytic domain can be present in the vector operably linked to regulatory elements. In one embodiment of the present invention, insect host cells are preferably transfected with the recombinant hBACE_synth_his/pFastbac baculoviral DNA, thereby resulting in expression of the BACE catalytic domain. In another embodiment of the present invention, insect host cells are preferably transfected with the FURIN/pFastBac Dual baculoviral DNA, thereby resulting in expression of furin. Transfection and co-transfection with the recombinant molecules can be effected using methods well known in the art.

Host cells may be stably transfected or transiently transfected with a recombinant expression plasmid or infected by a recombinant virus vector. The host cells include prokaryotic cells, such as *Escherichia coli*, fungal systems such as *Saccharomyces cerevisiae*, permanent cell lines derived from insects such as *Trichoplusia ni* HighFive cells, *Spodoptera frugiperda* (SF-9) cells and *Spodoptera frugiperda* (SF-21) cells, *Spodoptera frugiperda* (SF900+, U.S. Patent No. 6,103,066), and permanent mammalian cell lines such as Chinese hamster ovary (CHO) and SV40-transformed African green monkey kidney cells (COS).

The present invention contemplates "mutants" wherein a "mutant" refers to a polypeptide which is obtained by replacing at least one amino acid residue in a native or synthetic BACE catalytic domain with a different amino acid residue and/or by adding and/or deleting amino acid residues within the native polypeptide or at the N- and/or C-terminus of a polypeptide corresponding to a native BACE catalytic domain and which has substantially the same three-dimensional structure as the native BACE catalytic domain from which it is derived. Similarly, the present invention contemplates "mimics"; e.g., proteins that have substantially the same herein disclosed crystal structure of BACE. A mimic can be a mutant. By having substantially the same three-dimensional structure is meant having a set of atomic structure co-ordinates that have a root mean square deviation (r.m.s.d.) of less than or equal to about 2.0Å when superimposed with the atomic structure co-ordinates of the native BACE catalytic domain from which the mutant is derived when at least about 50% to 100% of the C_α atoms of the native catalytic domain are included in the superposition. A mutant or mimic may have, but need not have, β-secretase activity.

The co-ordinates of Table 5 provide a measure of atomic location in Angstroms, to a third decimal place. The co-ordinates are a relative set of positions that define a shape in three dimensions, so it is possible that an entirely different set of co-ordinates and/or space group having a different origin and/or axes and/or space group could define a similar or identical shape. Furthermore, varying the relative atomic positions of the atoms of the structure so that the root mean square deviation of the residue backbone atoms (i.e., the nitrogen-carbon-carbon backbone atoms of the protein amino acid residues) is less than 1.5Å (preferably less than 1.0Å and more preferably less than 0.5Å) when superimposed on the co-ordinates provided in Table 5 for the residue backbone atoms, will generally result in a structure which is substantially the same as the structure of Table 5 in terms of both its structural characteristics and potency for structure-based design or identification of BACE inhibitors or modulators. Likewise, changing the number and/or positions of the water molecules and/or substrate molecules of Table 5 will not generally affect the potency of the structure for structure-based design of BACE inhibitors or modulators. Thus, for the purposes described herein as being aspects of the present invention, it is within the scope of the present invention if: the Table 5 co-ordinates are transposed to a different origin and/or axes; the relative atomic positions of the atoms of the structures are varied so that the root mean square deviation of residue backbone atoms is less than 1.5Å (preferably less than 1.0Å and more preferably less than 0.5Å) when superimposed on the co-ordinates provided in Table 5 for the residue backbone atoms; and/or the number and/or positions of water molecules and/or substrate molecules is varied. Reference herein to the data of Table 5 accordingly includes the co-ordinate data in which one or more individual values of the Table are varied in this way. By "root mean square deviation" is meant the square root of the arithmetic mean of the squares of the deviations from the mean.

As used herein, "Crystal or crystalline structure" or "crystalline form": refers to a polypeptide in crystalline form. The term also includes co-crystals, as described herein. The term "co-crystal" refers to a crystal formed from a solution containing a mixture of the components i.e., polypeptide(s) and compound(s). Such compounds include, by way of example and not limitation, cofactors, substrates, substrate analogues, inhibitors, allosteric effectors, etc. Compounds include OM99-2, OM99-1 and a statine based peptide (Marcinkeviciene J., Luo Y., Gracian, NR., Combs Ap. And Copeland, RA. J. Biol Chem. 2001, 276:23790-23794). A soaked crystal is where a

crystal is produced from one component (polypeptide) and then the other component is soaked in the compound(s).

The "binding" which is detected between a ligand and the active site, such as to determine inhibitors of BACE is an "association" between the ligand and the active site; and "association" refers to a condition of proximity between a chemical entity or compound, or portions or fragments thereof, and the BACE catalytic domain protein, or portions or fragments thereof. The association may be non-covalent, i.e., where the juxtaposition is energetically favored by, e.g., hydrogen-bonding, van der Waals, electrostatic or hydrophobic interactions, or it may be covalent.

The "active site" refers to that site in BACE domains where substrate peptide binding and cleavage occur. It is the site in BACE that is sought to be blocked by an inhibitor or ligand. A "functional portion" of a BACE protein includes at least the active site.

A "crystallographically-related dimer" is a dimer of two molecules wherein the symmetry axes or planes that relate the two molecules comprising the dimer coincide with the symmetry axes or planes of the crystal lattice, whereas a "non-crystallographically-related dimer" is a dimer of two molecules wherein the symmetry axes or planes that relate the two molecules comprising the dimer do not coincide with the symmetry axes or planes of the crystal lattice. And, "Bilobal structure:" refers to two globular lobes of the BACE protein and corresponds to the amino- and carboxy-terminal halves of the protein.

BACE contains a signal sequence, a pro-peptide, a catalytic aspartyl protease domain, a transmembrane region and a C-terminal cytoplasmic region. During transit through the endoplasmic reticulum, BACE undergoes constitutive N-terminal processing in the Golgi apparatus in which the pro-peptide is cleaved by a furin-like protease (Bennet et al 2000, Creemers et al 2001). More specifically, BACE undergoes a series of post-translational modifications including glycosylation, disulfide bond formation and propeptide processing. Haniu et al. have shown that BACE is N-glycosylated at four sites (Asn-153, Asn-172, Asn-223 and Asn-354) and that six Cys residues in the ectodomain form three intramolecular disulphide bonds (Cys216-Cys420, Cys278-Cys333 and Cys330-Cys380).

The present invention relates to crystalline polypeptides corresponding to the catalytic domain of BACE. Preferably, the crystalline catalytic domains are of sufficient quality to allow the determination of the three-dimensional X-ray diffraction structure to a resolution of better than, i.e., numerically lower than, 3.0Å. The invention also relates to methods for preparing and crystallizing

the polypeptides. The polypeptides themselves, as well as information derived from their crystal structures can be used to analyze and modify BACE as well as to identify compounds that interact with the catalytic domain. This can allow for the rational design or identification of compounds that inhibit or modulate BACE or interact with BACE or associate with BACE; which compounds have therapeutic value.

Crystalline BACE

The crystals of the invention generally comprise substantially pure polypeptides corresponding to the BACE catalytic domain in crystalline form.

It is to be understood that the crystalline BACE catalytic domains of the invention are not limited to synthetic BACE domains. Indeed, the crystals of the invention also include native BACE catalytic domains and mutants and mimics of the BACE catalytic domain.

Amino acid substitutions, deletions and additions which do not significantly interfere with the three-dimensional structure of the BACE domain will depend, in part, on the region of the BACE domain where the substitution, addition or deletion occurs. In highly variable regions of the molecule, non-conservative substitutions as well as conservative substitutions may be tolerated without significantly disrupting the three-dimensional structure of the molecule. In highly conserved regions, or regions containing significant secondary structure, conservative amino acid substitutions are preferred.

Conservative amino acid substitutions are well-known in the art, and include substitutions made on the basis of similarity in polarity, charge, solubility, hydrophobicity, hydrophilicity and/or the amphipathic nature of the amino acid residues involved. For example, negatively charged amino acids include aspartic acid and glutamic acid; positively charged amino acids include lysine and arginine; amino acids with uncharged polar head groups having similar hydrophilicity values include the following: leucine, isoleucine, valine; glycine, alanine; asparagine, glutamine; serine, threonine; phenylalanine, tyrosine. Other conservative amino acid substitutions are well known in the art.

In some instances, it may be particularly advantageous or convenient to substitute, delete and/or add amino acid residues to a BACE catalytic domain in order to provide convenient cloning sites in cDNA encoding the polypeptide, to aid in purification of the polypeptide, etc. Such substitutions, deletions and/or additions which do not substantially alter the three dimensional structure of the BACE catalytic domain will be apparent to those having skills in the art.

It should be noted that the mutants contemplated herein need not exhibit enzymatic activity. Indeed, amino acid substitutions, additions or deletions that interfere with the β-secretase activity of the BACE domain but which do not significantly alter the three-dimensional structure of the domain are specifically contemplated by the invention. Such crystalline polypeptides, or the atomic structure co-ordinates obtained therefrom, can be used to identify compounds that bind to the native domain.

The co-crystals of the invention generally comprise a crystalline BACE domain polypeptide in association with one or more compounds. The association may be covalent or non-covalent. Such compounds include, but are not limited to, cofactors, substrates, substrate analogues, inhibitors, allosteric effectors, etc.

Production of Polypeptides

The synthetic and mutated BACE catalytic domain polypeptides described herein may be chemically synthesized in whole or part using techniques that are well-known in the art (*see, e.g.,* Kochendoerfer GG (2001) "Chemical protein synthesis methods in drug discovery". Current Opinion in Drug Discovery and Development 4, 205-214). Alternatively, methods which are well known to those skilled in the art can be used to construct expression vectors containing the synthetic or mutated BACE domain polypeptide coding sequence and appropriate transcriptional/translational control signals. These methods include in vitro recombinant DNA techniques, synthetic techniques and in vivo recombination/genetic recombination. See, for example, the techniques described in Maniatis et al., 1989.

A variety of host-expression vector systems may be utilized to express the synthetic BACE domain coding sequence. These include but are not limited to insect cell systems infected with recombinant virus (e.g., baculovirus) containing the BACE domain coding sequence or animal cell systems; microorganisms such as bacteria transformed with recombinant bacteriophage DNA, plasmid DNA or cosmid DNA expression vectors containing the BACE domain coding sequence and yeast transformed with recombinant yeast expression vectors containing the BACE domain coding sequence. The expression elements of these systems vary in their strength and specificities. Depending on the host/vector system utilized, any of a number of suitable transcription and translation elements, including constitutive and inducible promoters, may be used in the expression vector. For example, when cloning in insect cell systems, promoters such as the baculovirus polyhedrin promoter may be used; in bacterial systems, inducible promoters such as pL of

bacteriophage .mu., plac, ptrp, ptac (ptrp-lac hybrid promoter) and the like may be used; when cloning in mammalian cell systems, promoters derived from the genome of mammalian cells (e.g., metallothionein promoter) or from mammalian viruses (e.g., the adenovirus late promoter; the vaccinia virus 7.5K promoter) may be used and when generating cell lines that contain multiple copies of the BACE catalytic domain DNA, SV40-, BPV- and EBV-based vectors may be used with an appropriate selectable marker.

Crystallization Of Polypeptides And Characterization Of Crystal Structure

The crystals of the invention can be obtained by conventional means as are well-known in the art of protein crystallography, including batch, liquid bridge, dialysis, vapor diffusion and hanging drop methods (see, e.g., McPherson, 1982; McPherson, 1990; Webber, 1991).

Generally, the crystals of the invention are grown by dissolving substantially pure synthetic BACE domain polypeptide in an aqueous buffer containing a precipitant at a concentration just below that necessary to precipitate the protein. Water is removed by controlled evaporation to produce precipitating conditions, which are maintained until crystal growth ceases.

In a preferred embodiment of the invention, native crystals are grown by vapor diffusion in hanging drops (McPherson, 1982 and 1990). In this method, the polypeptide/precipitant solution is allowed to equilibrate in a closed container with a larger aqueous reservoir having a precipitant concentration optimal for producing crystals. Generally, equal volumes of a substantially pure polypeptide solution are mixed with an equal volume of reservoir solution, giving a precipitant concentration about half that required for crystallization. This solution is suspended as a droplet underneath a coverslip, which is sealed onto the top of the reservoir. The sealed container is allowed to stand, usually for about 2-6 weeks, until crystals grow.

Thus, the invention provides a method for crystallizing BACE which comprises producing a BACE protein, e.g., by recombinant production via a suitable host and/or vector such as through expression in insect cells, recovering the BACE and growing crystals from the recovered BACE. The BACE so produced is suitable for X-ray diffraction analysis. And, the growing of the crystals can be by any suitable means, advantageously the hanging drop method.

Uses of the Crystals and Atomic Structure Co-ordinates

The crystals of the invention, and particularly the atomic structure co-ordinates obtained therefrom, have a wide variety of uses. The crystals (either apo or co-complexed) and structure co-

ordinates (either apo or co-complexed) are particularly useful for identifying compounds that inhibit β-secretase activity as an approach towards developing new therapeutic agents.

The structure co-ordinates described herein can be used as phasing models in determining the crystal structures of additional synthetic or mutated BACE domains, as well as the structures of co-crystals of such domains with ligands such as inhibitors, agonists, antagonists, etc. The structure co-ordinates, as well as models of the three-dimensional structures obtained therefrom, can also be used to aid the elucidation of solution-based structures of synthetic or mutated BACE domains, such as those obtained via nuclear magnetic resonance (NMR).

The provision of the structure of BACE crystals in Table 5 provides the skilled artisan with a detailed insight into the mechanisms of action of BACE. This insight provides a means to design inhibitors of BACE which can be used for inhibiting BACE or the production of Aβ or fragments thereof or treating AD or disorders involving the production of Aβ or fragments thereof (which disorders are treatable by inhibition of BACE) in an individual in need thereof.

The provision of the crystal structure of BACE allows a novel approach for drug discovery, identification, and design for modulators, e.g., inhibitors, of BACE. Accordingly, the invention provides a computer-based method of rational drug design or identification which comprises: providing the structure of BACE as defined by the co-ordinates or the identifying co-ordinates in Table 5; providing a structure of a candidate modulator or inhibitor; and fitting the structure of the candidate to the structure of BACE of Table 5.

In an alternative aspect, the method may use the co-ordinates of atoms of interest of BACE which are in the vicinity of the active site or binding region in order to model the pocket in which the substrate or ligand binds. These co-ordinates may be used to define a space which is then screened "*in silico*" against a candidate modulator molecule. Thus, the invention provides a computer-based method of rational drug design or identification which comprises: providing the co-ordinates of at least two atoms of Table 5 of BACE ("selected co-ordinates"); providing the structure of a candidate modulator or inhibitor; and fitting the structure of the candidate to the selected co-ordinates of BACE.

In practice, it may be desirable to model a sufficient number of atoms of BACE as defined by the co-ordinates of Table 5 which represent the active site or binding region. Thus, there can be provided the co-ordinates of at least 5, advantageously at least 10, more advantageously at least 50 and even more advantageously at least 100 atoms of the BACE structure.

Accordingly, the methods of the invention can employ a sub-domain of interest of BACE which is in the vicinity of the active site or binding region, and the invention can provide a computer-based method for identifying or rationally designing a drug which comprises: providing the co-ordinates of at least a sub-domain of BACE; providing the structure of a candidate modulator or inhibitor of BACE; and fitting the structure of the candidate to the co-ordinates of the BACE sub-domain provided.

These methods can optionally include synthesizing the candidate and can optionally further include contacting the candidate with BACE to test whether there is binding and/or inhibition.

"Fitting" can mean determining, by automatic or semi-automatic means, interactions between at least one atom of the candidate and at least one atom of BACE and calculating the extent to which such an interaction is stable. Interactions can include attraction, repulsion, brought about by charge, steric considerations, and the like. A "sub-domain" can mean at least one, e.g., one, two, three, or four, complete element(s) of secondary structure. Particular regions of BACE include those identified in Table 5.

Modulators of BACE may be inhibitors of BACE or compounds which affect its specificity or activity in other ways. Advantageously, modulators are inhibitors.

The step of providing the structure of a candidate modulator molecule may involve selecting the compound by computationally screening a database of compounds for interaction with the active site. For example, a 3-D descriptor for the potential modulator may be derived, the descriptor including geometric and functional constraints derived from the architecture and chemical nature of the active site. The descriptor may then be used to interrogate the compound database, a potential modulator being a compound that has a good match to the features of the descriptor. In effect, the descriptor can be a type of virtual pharmacophore.

In any event, the determination of the three-dimensional structure of BACE provides a basis for the design of new and specific modulators for BACE. For example, from knowing the three-dimensional structure of BACE, computer modelling programs may be used to design or identify different molecules expected to interact with possible or confirmed active sites such as binding sites or other structural or functional features of BACE.

More specifically, a potential modulator of BACE activity can be examined through the use of computer modeling using a docking program such as GRAM, DOCK or AUTODOCK (*see* Walters et al. Drug Discovery Today, vol. 3, no. 4 (1998), 160-178, and Dunbrack et al. Folding

and Design 2 (1997), 27-42) to identify potential inhibitors of BACE. This procedure can include computer fitting of potential modulators to BACE to ascertain how well the shape and the chemical structure of the potential modulator (e.g., inhibitor) will bind to the enzyme.

Also, computer-assisted, manual examination of the active site or binding site of BACE may be performed. The use of programs such as GRID (P. Goodford, J. Med. Chem, 1985, 28, 849-57) – program that determines probable interaction sites between molecules with various functional groups and the enzyme surface – may also be used to analyze the active site or binding site to predict partial structures of modulating compounds.

Computer programs can be employed to estimate the attraction, repulsion or steric hindrance of the two binding partners, e.g., BACE and a candidate inhibitor. Generally, the tighter the fit, the fewer the steric hindrances, and the greater the attractive forces, the more potent the potential modulator, since these properties are consistent with a tighter binding constant. Furthermore, the more specificity in the design of a candidate modulator, the more likely it is that it will not interact with other proteins as well. This will tend to minimize potential side-effects due to unwanted interactions with other proteins.

In a further aspect the invention provides for a method for determining the structure of a modulator of BACE bound to BACE, said method comprising, (a) providing a crystal of BACE according to the invention, (b) soaking the crystal with said modulator; and (c) determining the structure of said BACE-modulator complex.

The invention further involves, in place of or in addition to *in silico* methods, high throughput screening of compounds to select compounds with binding activity. Those compounds which show binding activity may be selected as possible candidate modulators, and further crystallized with BACE, e.g., by co-crystallization or by soaking, for X-ray analysis. The resulting X-ray structure may be compared with that of Table 5 for a variety of purposes. For example, where the contacts made by such compounds overlap with those made by BACE, novel molecules comprising residues which contain contacts of BACE and other compounds may be provided.

Having designed, identified, or selected possible binding candidate modulators or inhibitors by determining those which have favorable fitting properties, e.g., strong attraction between a candidate and BACE, these can be then screened for activity. Consequently, the invention further involves: obtaining or synthesizing the candidate modulator or inhibitor; and contacting the candidate modulator or inhibitor with BACE to determine the ability of the candidate to inhibit or

modulate or interact with BACE. In the latter step, the candidate is advantageously contacted with BACE under conditions to determine its function. Instead of, or in addition to, performing such an assay, the invention may comprise: obtaining or synthesizing the candidate modulator, forming a complex of BACE and the candidate, and analyzing the complex, e.g., by X-ray diffraction or NMR or other means, to determine the ability of the candidate to interact with BACE. Detailed structural information can then be obtained about the binding of the candidate to BACE, and in light of this information, adjustments can be made to the structure or functionality of the potential modulator, e.g., to improve its binding to BACE. These steps may be repeated and re-repeated as necessary. Advantageously, in the contacting step, the potential modulator is contacted with BACE in the presence of a substrate and typically a buffer, to determine the ability of the potential modulator to alter the function of BACE.

The invention further involves a method of determining three dimensional structures of BACE homologues of unknown structure by using the structural co-ordinates of Table 5. For example, if X-ray crystallographic or NMR spectroscopic data is provided for a BACE homologue of unknown structure, the structure of BACE as defined in Table 5 may be used to interpret that data to provide a likely structure for the BACE homologue by techniques well known in the art, e.g., by phase modeling in the case of X-ray crystallography. Thus, an inventive method can comprise: aligning a representation of an amino acid sequence of a BACE homologue of unknown structure with the amino acid sequence of BACE to match homologous regions of the amino acid sequences; modeling the structure of the matched homologous regions of the BACE of unknown structure on the structure as defined in Table 5 of the corresponding regions of BACE; and, determining a conformation (e.g. so that favorable interactions are formed within the BACE of unknown structure and/or so that a low energy conformation is formed) for the BACE of unknown structure which substantially preserves the structure of said matched homologous regions. "Homologous regions" describes amino acid residues in two sequences that are identical or have similar, e.g., aliphatic, aromatic, polar, negatively charged, or positively charged, side-chain chemical groups. Identical and similar residues in homologous regions are sometimes described as being respectively "invariant" and "conserved" by those skilled in the art. Advantageously, the first and third steps are performed by computer modeling. Homology modeling is a technique that is well known to those skilled in the art (*see, e.g.,* Greer, Science vol. 228 (1985) 1055, and Blundell et al. Eur J Biochem vol 172 (1988), 513).

In general, comparison of amino acid sequences is accomplished by aligning an amino acid sequence of a polypeptide of a known structure with the amino acid sequence of a the polypeptide of unknown structure. Amino acids in the sequences are then compared and groups of amino acids that are homologous are grouped together. This method detects conserved regions of the polypeptides and accounts for amino acid insertions and deletions. Homology between amino acid sequences can be determined by using commercially available algorithms. In addition to those otherwise mentioned herein, mention is made too of the programs BLAST, gapped BLAST, BLASTN, and PSI-BLAST, provided by the National Center for Biotechnology Information. These programs are widely used in the art for this purpose and can align homologous regions of two amino acid sequences.

Once the amino acid sequence of the polypeptides with known and unknown structures are aligned, the structures of the conserved amino acids in a computer representation of the polypeptide with known structure are transferred to the corresponding amino acids of the polypeptide whose structure is unknown. For example, a tyrosine in the amino acid sequence of known structure may be replaced by a phenylalanine, the corresponding homologous amino acid in the amino acid sequence of unknown structure. The structures of amino acids located in non-conserved regions may be assigned manually using standard peptide geometries or by molecular simulation techniques, such as molecular dynamics. Refining the entire structure can be by molecular dynamics and/or energy minimization.

The aspects of the invention which employ the BACE structure *in silico* may be equally applied to homologue models of BACE obtained by the above aspect of the invention and this forms yet a further embodiment of the invention. Thus, having determined a conformation of a BACE by the methods described herein, such a conformation may be used in a computer-based method of rational drug or compound design or identification as described herein.

The invention further provides a method for determining the structure of a modulator of BACE bound to BACE comprising: providing a crystal of BACE, e.g., according to the invention, soaking the crystal with the modulator, and determining the structure of the BACE-modulator complex. Alternatively or additionally the BACE and the modulator may be co-crystallized.

Having obtained and characterized a modulator according to the invention, the invention further provides a method for modulating the activity of BACE which comprises: providing BACE under conditions where, in the absence of a modulator, BACE is able to exhibit secretase activity,

providing a modulator compound (e.g., contacting the modulator and the BACE), determining the extent to which the activity of BACE is altered by the presence of the modulator compound.

The invention further provides systems, such as computer systems, intended to generate structures and/or perform rational drug design for a BACE or complex of BACE and a potential modulator. The system can contain: atomic co-ordinate data according to Table 5 or derived therefrom by homology modeling, said data defining the three-dimensional structure of a BACE or at least one sub-domain thereof; or structure factor data for BACE, said structure factor data being derivable from the atomic co-ordinate data of Table 5. The invention also involves computer readable media with: atomic co-ordinate data according to Table 5 or derived therefrom by homology modeling, said data defining the three-dimensional structure of a BACE or at least one sub-domain thereof; or structure factor data for BACE, said structure factor data being derivable from the atomic co-ordinate data of Table 5. "Computer readable media" refers to any media which can be read and accessed directly by a computer, and includes, but is not limited to: magnetic storage media such as floppy discs, hard storage medium and magnetic tape; optical storage media such as optical discs or CD-ROM; electrical storage media such as RAM and ROM; and hybrids of these categories, such as magnetic/optical media. By providing such computer readable media, the atomic co-ordinate data can be routinely accessed to model BACE or a sub-domain thereof. For example RASMOL (Sayle et al., TIBS vol. 20 (1995), 374) is a publicly available software package which allows access and analysis of atomic co-ordinate data for structural determination and/or rational drug design. The invention further comprehends methods of doing business by providing access to such computer readable media and/or computer systems and/or atomic co-ordinate data to users; e.g., the media and/or atomic co-ordinate data can be accessible to a user, for instance on a subscription basis, via the Internet or a global communication/computer network; or, the computer system can be available to a user, on a subscription basis. Structure factor data, which are derivable from atomic co-ordinate data (*see, e.g.*, Blundell et al., in Protein Crystallography, Academic Press, NY, London and San Francisco (1976)), are particularly useful for calculating, e.g., difference Fourier electron density maps. Thus, there are additional uses for the computer readable media and/or computer systems and/or atomic co-ordinate data and additional reasons to provide them to users. A "computer system" refers to the hardware means, software means and data storage means used to analyze the atomic co-ordinate data of the present invention. The minimum hardware means of computer-based

systems of the invention may comprise a central processing unit (CPU), input means, output means, and data storage means. Desirably, a monitor is provided to visualize structure data. The data storage means may be RAM or other means for accessing computer readable media of the invention. Examples of such systems are microcomputer workstations available from Silicon Graphics Incorporated and Sun Microsystems running Unix based, Windows NT or IBM OS/2 operating systems.

The invention also provides a method of analyzing a complex of BACE and a potential modulator comprising: employing X-ray crystallographic diffraction data from the complex and a three-dimensional structure of BACE or at least a sub-domain thereof, to generate a difference Fourier electron density map of the complex; advantageously, the three-dimensional structure being as defined by the atomic co-ordinate data according to Table 5.

Such complexes can be crystallized and analyzed using X-ray diffraction methods, e.g., according to the approaches described by Greer et al., J of Medicinal Chemistry, vol 37 (1994), 1035-54, and difference Fourier electron density maps can be calculated based on X-ray diffraction patterns of soaked or co-crystallized BACE and the solved structure of uncomplexed BACE. These maps can then be used to determine whether and where a particular potential modulator binds to BACE and/or changes the conformation of BACE. Electron density maps can be calculated using programs such as those from the CCP4 computer package (Collaborative Computing Project, No. 4. The CCP4 Suite: Programs for Protein Crystallography, Acta Crystallographica, D50, 1994, 760-763). For map visualization and model building programs such as "QUANTA" (1994, San Diego, CA: Molecular Simulations, Jones et al., Acta Crystallography A47 (1991), 110-119) can be used.

Table 5 gives atomic co-ordinate data for BACE complexed with OM99-2, and lists each atom by a unique number; the chemical element and its position in each amino acid residue, the amino acid residue in which the element is located, the chain identifier, the number of the residue, co-ordinates (e.g., X, Y, Z) which define with respect to the crystallographic axes the atomic position (in Å) of the respective atom, the occupancy of the atom in the respective position, "B", isotropic displacement parameter (in $Å^2$) which accounts for movement of the atom around its atomic center, and atomic number.

Determination of the 3D structure of BACE provides important information about the likely active site(s) of BACE, particularly when comparisons are made with other enzymes, such as

similar enzymes. This information may be used for rational design of BACE inhibitors, e.g., by computational techniques that identify possible binding ligands for the active site(s), by enabling linked-fragment approaches to drug design, and by enabling the identification and location of bound ligands using analyses such as X-ray crystallographic analysis.

Greer et al., *supra*, relates to an iterative approach to ligand design based on repeated sequences of computer modeling, protein-ligand complex formation, and X-ray analysis. Thymidylate synthase inhibitors were designed by Greer; and, BACE inhibitors may also be designed in this way. Using, for example, GRID (P. Goodford, J. Med. Chem, 1985, 28, 849-57) or the solved 3D structure of BACE, a potential modulator of BACE may be designed that complements the functionalities of the BACE active site(s). The potential modulator can be synthesized, formed into a complex with BACE, and the complex then analyzed, e.g., by X-ray crystallography, NMR or a combination thereof, to identify the actual position of the bound compound.

Determination of the position of the potential modulator compound in the complex allows determination of the interactions of it with BACE. This allows the skilled artisan to analyze the affinity and specificity of the compound for BACE, and to propose modifications to the compound to increase or decrease either or both of these properties. Thus, the structure and/or functional groups of the compound can then be adjusted, if necessary or desired, in view of the results from the analysis (e.g., X-ray analysis), and the synthesis and analysis sequence repeated until an optimized compound is obtained. Related approaches to structure-based drug design are also discussed in other documents cited herein, as well as in Bohacek et al., Medicinal Research Reviews, vol. 16 (1996), 3-5.

As a result of the determination of the BACE 3D structure, more purely computational techniques for rational drug design may also be used to design BACE modulators; for example, automated ligand-receptor docking programs (*see* Jones et al., in Current Opinion in Biotechnology, vol 6 (1995), 652-656) which require accurate information on the atomic co-ordinates of target receptors, may be used to design or identify potential BACE modulators or inhibitors.

Linked-fragment approaches to drug design also require accurate information on the atomic co-ordinates of a target. Small compounds that have the potential to bind to regions of BACE which in themselves may not be modulator compounds may be assembled by chemical linkage to

provide potential modulators. Thus, the basic idea behind these approaches is to determine the binding locations of more than one, e.g., plural or a plurality of, ligands to a target molecule, and then construct a molecular scaffold to connect the ligands together in such a way that their relative binding positions are preserved. The ligands may be provided computationally and modeled in a computer system, or provided in an experimental setting, wherein crystals according to the invention are provided and more than one, e.g., plural or a plurality of, ligands soaked separately or in mixed pools into the crystal prior to analysis, e.g., X-ray analysis, and determination of their location.

The binding site of two or more ligands are determined and may be connected to thus form a potential lead compund that can be further refined, e.g., the iterative technique of Greer et al. For a virtual linked-fragment approach, see Verlinde et al., J of Computer-Aided Molecular Design 6 (1992), 131-147 and for NMR and X-ray approaches, see Skuker et al., Science 274 (1996), 1531-1534, and Stout et al., Structure 6 (1998), 839-48. The use of these or other approaches to design and/or identify BACE modulators (*see, e.g.*, patent documents cited herein such as in the Background Section, *supra*) is made possible by the determination of the BACE structure.

Many of the techniques and approaches to structure-based described herein employ X-ray analysis to identify the binding position of a potential modulator in a complex with a protein. A common way of doing this is to perform X-ray crystallography on the complex, produce a difference Fourier electron density map, and associate a particular pattern of electron density with the potential modulator. However, to produce a map (*See* Blundell et al., *supra*), it is important to know the 3D structure of the protein beforehand (or at least the protein structure factors). Therefore, determination of the BACE structure also allows difference Fourier electron density maps of complexes of BACE with a potential modulator to be produced, which can greatly assist in the process of rational compound and/or drug design or identification.

The approaches to structure-based drug or compound design or identification described herein involve initial identification of possible compounds for interaction with the target molecule (in this case BACE). Sometimes these compounds are known, e.g., from research literature. However, when they are not, or when novel compounds are wanted, a first stage of the drug or compound design or identification program may involve computer-based *in silico* screening of compound databases (such as the Cambridge Structural Database) with the aim of identifying compounds which interact with the active site or sites of the target bio-molecule (in this case

BACE). Screening selection criteria may be based on pharmacokinetic properties such as metabolic stability and toxicity. However, determination of the BACE structure allows the architecture and chemical nature of each BACE active site to be identified, which in turn allows the geometric and functional constraints of a descriptor for the potential inhibitor to be derived. The descriptor can be, therefore, a type of virtual 3D pharmacophore, which can also be used as selection criteria or filter for database screening.

Compounds which have a chemical structure selected using the invention, wherein said compounds are BACE modulators or inhibitors, form a further aspect of the invention; and, such compounds may be used in methods of medical treatments, such as for inhibiting BACE or the production of Aβ or fragments thereof or treating AD or other maladies involving BACE or the production of Aβ or fragments thereof. Further, such compounds may be used in the preparation of medicaments for such treatments. The compounds may be employed alone or in combination with other treatments for inhibiting BACE or the production of Aβ or fragments thereof or treating AD or other maladies involving BACE or the production of Aβ or fragments thereof; and, the compounds may be used in the preparation of combination medicaments for such treatments, or in kits containing the compound and the other treatment.

Turning more specifically to BACE, BACE is a pepsin-like aspartyl proteinase, the mature enzyme consisting of the N-terminal catalytic domain, a transmembrane domain, and a small cytoplasmic domain. BACE has an optimum activity at pH 4.5 (Vassar et al, 1999) or pH 5.0 (Yan et al. 1999) and is found in acidic subcellular compartments such as golgi and endosomes (Vassar et al., 1999 and Capell et al., 2000). The pH in the endosome and trans golgi network, where BACE appears to function, fluctuates in the range of pH 4.5 - 6.0 with the average pH being stated as 5.0 (Lee et al. 1996) and pH 5.4 (Overly et al. 1995). BACE is not inhibited by standard pepsin inhibitors such as pepstatin. It has been shown that the catalytic domain minus the transmembrane and cytoplasmic domain has activity against substrate peptides (Lin et al, 2000). Consequently, this soluble catalytic domain is suitable for crystallization studies and a crystal structure of this will give a representative structure of the BACE active site for the design of inhibitor molecules. Ideally it would be desirable to crystallize a form of BACE with an unoccupied active site. This could be used to soak in small molecule inhibitors of the enzyme and to investigate their binding modes. Crystals of BACE grown both in the presence and absence of inhibitor, having same space group and similar unit cell parameters are described. These crystals are grown between pH 5.6 and

pH 5.8 and thus are grown at the biologically relevant pH of BACE. This is also close to the optimum pH of the enzyme. Upon soaking the C2 crystal form with a ligand, some reorganization of the molecules in the crystal will take place, resulting in a space group change from C2 to $P2_1$. The cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 form. Because the BACE crystals are grown at physiologically relevant pH the compounds identified in accordance with the invention would be of more biological relevance. The lead compounds/inhibitors generated may be of higher therapeutic value and would truly reflect the mode of inhibition *in vivo*, particularly for those compounds that are susceptible to changes in protonation state.

A synthetic gene encoding the pro- and aspartyl protease domains of BACE was constructed (see Example 1). The construct extended from Thr 22 to Ser 453 (numbering refers to the full-length BACE sequence, e.g. Genbank accession P56817, SEQ ID NO:6). In each of the four potential glycosylation sites (Asn-X-Ser/Thr: Asparagines-153, -172, -223 and -354) the Asparagine residue was mutated to Glutamine to prevent glycosylation of the protein. Silent mutations were also introduced into the coding sequence in order to reduce the GC content of the gene (Figure 1A shows an alignment of the synthetic DNA sequence of the present invention with other wild-type BACE genes). A His_6 peptide tag was added to the C-terminus of the protein sequence to facilitate purification on Nickel agarose (see Example 1).

Both forms of the protein could be detected using an anti-His_6 antibody (see Figure 5); only the unprocessed form containing the pro-peptide was detected using an anti-FLAG antibody. Further changes to the synthetic BACE catalytic domain sequence were the addition of the baculoviral gp67 signal sequence instead of the BACE signal, the addition of a FLAG tag to the N-terminus of the pro-peptide. The gp67 signal sequence increased the secretion of the protein into the cell culture medium, and the FLAG tag was added to allow differentiation between species arising from incomplete pro-peptide cleavage (and to determine if separation is required) (see Figure 6). Insect cells infected with the BACE baculovirus secreted a mixture of processed and unprocessed BACE into the culture medium. Figure 2A shows the polypeptide sequence encoded by the synthetic BACE gene.

As mentioned previously, the invention comprehends the use of the inventive BACE proteins in assays or methods for determining inhibitors thereof, e.g., compounds, compositions or active agents or ingredients that bind to BACE, advantageously irreversibly, preferably so as to

have a therapeutic effect with respect to AD and other maladies. After determination of a suitable compound, composition, active agent or ingredient that binds to BACE, the compound, composition, active agent or ingredient is then formulated into a composition for administration and is administered to a subject in need thereof. These therapeutics can be administered in known formulations, by known routes of administration, following the teachings of documents cited herein.

It is noted that these therapeutics can be a chemical compound and/or antibody and/or portion thereof or a pharmaceutically acceptable salt and can be administered alone or as an active ingredient in combination with pharmaceutically acceptable carriers, diluents, and vehicles, as well as other active ingredients.

The compounds can be administered orally, subcutaneously or parenterally including intravenous, intraarterial, intramuscular, intraperitoneally, and intranasal administration as well as intrathecal and infusion techniques.

It is noted that humans are treated generally longer than the mice or other experimental animals which treatment has a length proportional to the length of the disease process and drug effectiveness. The doses may be single doses or multiple doses over a period of several days, but single doses are preferred. Thus, one can scale up from animal experiments, e.g., rats, mice, and the like, to humans, by techniques from this disclosure and documents cited herein and the knowledge in the art, without undue experimentation.

The treatment generally has a length proportional to the length of the disease process and drug effectiveness and the patient being treated.

When administering a therapeutic of the present invention parenterally, it will generally be formulated in a unit dosage injectable form (solution, suspension, emulsion). The pharmaceutical formulations suitable for injection include sterile aqueous solutions or dispersions and sterile powders for reconstitution into sterile injectable solutions or dispersions. The carrier can be a solvent or dispersing medium containing, for example, water, ethanol, polyol (for example, glycerol, propylene glycol, liquid polyethylene glycol, and the like) , suitable mixtures thereof, and vegetable oils.

Proper fluidity can be maintained, for example, by the use of a coating such as lecithin, by the maintenance of the required particle size in the case of dispersion and by the use of surfactants. Nonaqueous vehicles such a cottonseed oil, sesame oil, olive oil, soybean oil, corn oil, sunflower

oil, or peanut oil and esters, such as isopropyl myristate, may also be used as solvent systems for compound compositions

Additionally, various additives which enhance the stability, sterility, and isotonicity of the compositions, including antimicrobial preservatives, antioxidants, chelating agents, and buffers, can be added. Prevention of the action of microorganisms can be ensured by various antibacterial and antifungal agents, for example, parabens, chlorobutanol, phenol, sorbic acid, and the like. In many cases, it will be desirable to include isotonic agents, for example, sugars, sodium chloride, and the like. Prolonged absorption of the injectable pharmaceutical form can be brought about by the use of agents delaying absorption, for example, aluminum monostearate and gelatin. According to the present invention, however, any vehicle, diluent, or additive used would have to be compatible with the compounds.

Sterile injectable solutions can be prepared by incorporating the compounds utilized in practicing the present invention in the required amount of the appropriate solvent with various amounts of the other ingredients, as desired.

A pharmacological formulation of the present invention, e.g., comprising a therapeutic compound, can be administered to the patient in an injectable formulation containing any compatible carrier, such as various vehicles, adjuvants, additives, and diluents; or the compounds utilized in the present invention can be administered parenterally to the patient in the form of slow-release subcutaneous implants or targeted delivery systems such as monoclonal antibodies, iontophoretic, polymer matrices, liposomes, and microspheres.

A pharmacological formulation of the compound utilized in the present invention can be administered orally to the patient. Conventional methods such as administering the compounds in tablets, suspensions, solutions, emulsions, capsules, powders, syrups and the like are usable. Known techniques which deliver the compound orally or intravenously and retain the biological activity are preferred.

In one embodiment, a formulation of the present invention can be administered initially, and thereafter maintained by further administration. For instance, a formulation of the invention can be administered in one type of composition and thereafter further administered in a different or the same type of composition. For example, a formulation of the invention can be administered by intravenous injection to bring blood levels to a suitable level. The patient's levels are then

maintained by an oral dosage form, although other forms of administration, dependent upon the patient's condition, can be used.

The quantity to be administered will vary for the patient being treated and will vary from about 100 ng/kg of body weight to 100 mg/kg of body weight per day and preferably will be from 10 pg/kg to 10 mg/kg per day. For instance, dosages can be readily ascertained by those skilled in the art from this disclosure and the knowledge in the art. Thus, the skilled artisan can readily determine the amount of compound and optional additives, vehicles, and/or carrier in compositions and to be administered in methods of the invention. Typically, an adjuvant or additive is commonly used as 0.001 to 50 wt% solution in phosphate buffered saline, and the active ingredient is present in the order of micrograms to milligrams, such as about 0.0001 to about 5 wt%, preferably about 0.0001 to about 1 wt%, most preferably about 0.0001 to about 0.05 wt% or about 0.001 to about 20 wt%, preferably about 0.01 to about 10 wt%, and most preferably about 0.05 to about 5 wt%. Of course, for any composition to be administered to an animal or human, and for any particular method of administration, it is preferred to determine therefor: toxicity, such as by determining the lethal dose (LD) and LD_{50} in a suitable animal model e.g., rodent such as mouse; and, the dosage of the composition(s), concentration of components therein and timing of administering the composition(s), which elicit a suitable response, such as by titrations of sera and analysis thereof. Such determinations do not require undue experimentation from the knowledge of the skilled artisan, this disclosure and the documents cited herein. And, the time for sequential administrations can be ascertained without undue experimentation.

Examples of compositions comprising a therapeutic of the invention include liquid preparations for orifice, e.g., oral, nasal, anal, vaginal, peroral, intragastric, mucosal (e.g., perlingual, alveolar, gingival, olfactory or respiratory mucosa) etc., administration such as suspensions, syrups or elixirs; and, preparations for parenteral, subcutaneous, intradermal, intramuscular or intravenous administration (e.g., injectable administration), such as sterile suspensions or emulsions. Such compositions may be in admixture with a suitable carrier, diluent, or excipient such as sterile water, physiological saline, glucose or the like. The compositions can also be lyophilized. The compositions can contain auxiliary substances such as wetting or emulsifying agents, pH buffering agents, gelling or viscosity enhancing additives, preservatives, flavoring agents, colors, and the like, depending upon the route of administration and the preparation desired. Standard texts, such as "REMINGTON'S PHARMACEUTICAL SCIENCE",

17th edition, 1985, incorporated herein by reference, may be consulted to prepare suitable preparations, without undue experimentation.

Compositions of the invention, are conveniently provided as liquid preparations, e.g., isotonic aqueous solutions, suspensions, emulsions or viscous compositions which may be buffered to a selected pH. If digestive tract absorption is preferred, compositions of the invention can be in the "solid" form of pills, tablets, capsules, caplets and the like, including "solid" preparations which are time-released or which have a liquid filling, e.g., gelatin covered liquid, whereby the gelatin is dissolved in the stomach for delivery to the gut. If nasal or respiratory (mucosal) administration is desired, compositions may be in a form and dispensed by a squeeze spray dispenser, pump dispenser or aerosol dispenser. Aerosols are usually under pressure by means of a hydrocarbon. Pump dispensers can preferably dispense a metered dose or, a dose having a particular particle size.

Compositions of the invention can contain pharmaceutically acceptable flavors and/or colors for rendering them more appealing, especially if they are administered orally. The viscous compositions may be in the form of gels, lotions, ointments, creams and the like (e.g., for transdermal administration) and will typically contain a sufficient amount of a thickening agent so that the viscosity is from about 2500 to 6500 cps, although more viscous compositions, even up to 10,000 cps may be employed. Viscous compositions have a viscosity preferably of 2500 to 5000 cps, since above that range they become more difficult to administer. However, above that range, the compositions can approach solid or gelatin forms which are then easily administered as a swallowed pill for oral ingestion.

Liquid preparations are normally easier to prepare than gels, other viscous compositions, and solid compositions. Additionally, liquid compositions are somewhat more convenient to administer, especially by injection or orally. Viscous compositions, on the other hand, can be formulated within the appropriate viscosity range to provide longer contact periods with mucosa, such as the lining of the stomach or nasal mucosa.

Obviously, the choice of suitable carriers and other additives will depend on the exact route of administration and the nature of the particular dosage form, e.g., liquid dosage form (e.g., whether the composition is to be formulated into a solution, a suspension, gel or another liquid form), or solid dosage form (e.g., whether the composition is to be formulated into a pill, tablet, capsule, caplet, time release form or liquid-filled form).

Solutions, suspensions and gels, normally contain a major amount of water (preferably purified water) in addition to the active compound. Minor amounts of other ingredients such as pH adjusters (e.g., a base such as NaOH), emulsifiers or dispersing agents, buffering agents, preservatives, wetting agents, jelling agents, (e.g., methylcellulose), colors and/or flavors may also be present. The compositions can be isotonic, i.e., it can have the same osmotic pressure as blood and lacrimal fluid.

The desired isotonicity of the compositions of this invention may be accomplished using sodium chloride, or other pharmaceutically acceptable agents such as dextrose, boric acid, sodium tartrate, propylene glycol or other inorganic or organic solutes. Sodium chloride is preferred particularly for buffers containing sodium ions.

Viscosity of the compositions may be maintained at the selected level using a pharmaceutically acceptable thickening agent. Methylcellulose is preferred because it is readily and economically available and is easy to work with. Other suitable thickening agents include, for example, xanthan gum, carboxymethyl cellulose, hydroxypropyl cellulose, carbomer, and the like. The preferred concentration of the thickener will depend upon the agent selected. The important point is to use an amount which will achieve the selected viscosity. Viscous compositions are normally prepared from solutions by the addition of such thickening agents.

A pharmaceutically acceptable preservative can be employed to increase the shelf-life of the compositions. Benzyl alcohol may be suitable, although a variety of preservatives including, for example, parabens, thimerosal, chlorobutanol, or benzalkonium chloride may also be employed. A suitable concentration of the preservative will be from 0.02% to 2% based on the total weight although there may be appreciable variation depending upon the agent selected.

Those skilled in the art will recognize that the components of the compositions should be selected to be chemically inert with respect to the active compound. This will present no problem to those skilled in chemical and pharmaceutical principles, or problems can be readily avoided by reference to standard texts or by simple experiments (not involving undue experimentation), from this disclosure and the documents cited herein.

The inventive compositions of this invention are prepared by mixing the ingredients following generally accepted procedures. For example the selected components may be simply mixed in a blender, or other standard device to produce a concentrated mixture which may then be adjusted to the final concentration and viscosity by the addition of water or thickening agent and

possibly a buffer to control pH or an additional solute to control tonicity. Generally the pH may be from about 3 to 7.5. Compositions can be administered in dosages and by techniques well known to those skilled in the medical and veterinary arts taking into consideration such factors as the age, sex, weight, and condition of the particular patient, and the composition form used for administration (e.g., solid vs. liquid). Dosages for humans or other mammals can be determined without undue experimentation by the skilled artisan, from this disclosure, the documents cited herein, and the knowledge in the art.

Suitable regimes for initial administration and further doses or for sequential administrations also are variable, may include an initial administration followed by subsequent administrations; but nonetheless, may be ascertained by the skilled artisan, from this disclosure, the documents cited herein, and the knowledge in the art.

Accordingly, the invention comprehends, in further aspects, methods for preparing therapeutic compositions including an active agent, ingredient or compound or BACE inhibitor as from inventive methods herein for ascertaining compounds that bind to and/or inhibit BACE, as well as to methods for inhibiting BACE or the production of Aβ or fragments thereof or treating AD or other maladies.

Furthermore, as discussed herein, the inventive BACE proteins are useful in generating antibodies, which are themselves useful in assays as well as in therapeutics. From documents cited herein, one can readily make and use anti-BACE antibodies and methods for producing monoclonal antibodies are well known to those of ordinary skill in the art, *see, e.g.*, U.S. Patent No. 4,196,265 and 6,221,645. Thus, the BACE proteins of the invention can be used to generate antibodies and the antibodies can be used, without undue experimentation.

The invention will now be further described by the following non-limiting Examples, given by way of illustration.

EXAMPLES

EXAMPLE 1: Production of BACE in Insect Cells

A. Gene Construction and Cloning

The synthetic BACE catalytic domain sequence was constructed a combination of oligonucleotide synthesis and overlap PCR (Cambridge Bioscience Ltd, Cambridge UK). Mutations were inserted at specific sites within the BACE catalytic domain sequence during synthesis to reduce the GC content of the gene. The synthetic gene was then cut with restriction

enzymes *Sal*1 and *Not*1 to generate a 1489 bp fragment which was then subcloned into the expression vector pFastBac1 (LifeTechnologies), and the DNA sequence verified by standard DNA sequencing methods (e.g., electrophoresis and automated DNA sequence analysis of the insert).

The cDNA encoding human furin was cut by restriction enzymes to generate a 3216 bp *Sma*1 Xma1 fragment that was then subcloned into the expression vector pFastBac Dual (LifeTechnologies).

B. Baculovirus Generation and Fermentation

Recombinant baculoviruses were constructed by using the expression vectors of the Bac-to-Bac™ system (LifeTechnologies), according to the manufacturers instructions. Manipulations involving insect cells and baculoviruses were carried out according to standard protocols (King and Possee, 1992).

As it has been shown that coexpression of the prohormone convertase furin increases expression of mature TGF-β in insect cells (Laprise et al., 1998), the effect of furin co-expression on BACE production was evaluated i.e., while the total amount of BACE produced did not increase with furin coespression, there was a reproducible increase in the fraction of processed protein from about 30% of total BACE up to about 60%; this result is quite surprising and advantageous.

Trichoplusia ni HighFive cells (Invitrogen, Carlsbad CA,USA) were found to give higher levels of BACE expression than *Spodoptera frugiperda* Sf9 cells, and were used for all protein production. Protein production was carried out in a 20-30 liter working volume bioreactor (Applikon Dependable Instruments, Schiedam, Netherlands), containing Excell 405 medium (JRH Scientific). Cells were infected at a multiplicity of infection (MOI) of 0.1 of each virus at a cell density of $1.5x10^6$ cells/ml. Glucose concentration was measured during the fermentation and adjusted to maintain the starting concentration. Three days after viral infection the HighFive cells were cleared from the medium by continuous flow centrifugation and the medium was concentrated approximately 30-fold by ultrafiltration.

C. Purification of BACE

The expressed BACE protein was purified by affinity chromatography on nickel agarose resin. Initially, the concentrated medium containing the expressed BACE protein was dialysed overnight against 50mM sodium phosphate pH 8.0, 50mM sodium acetate, 300mM NaCl and 10ml Ni-NTA agarose resin (Qiagen) and equilibrated in the above buffer. Imidazole (Sigma) was added to a final concentration of 5mM , Pefabloc (Roche Molecular Biochemicals, Lewes, UK) was

added to 0.1g/L and the sample was mixed gently overnight at 4°C. The nickel agarose resin was then loaded onto an empty column and washed with 50mM sodium phosphate pH 8.0, 300mM NaCl until the absorption at 280 nm reached the baseline level of the above-mentioned buffer. The column was then washed with 4 column volumes of 50mM sodium phosphate pH 8.0, 50mM NaCl, 15mM imidazole. The BACE protein was then eluted with a linear imidazole concentration gradient, five column volumes in size, from 50mM sodium phosphate pH 8.0, 50mM NaCl to 50mM sodium phosphate pH 8.0, 50mM NaCl, 300mM imidazole, typically resulting in an absorption peak at 280nm, corresponding to the BACE protein and other co-purified contaminating proteins.

After Nickel chromatography the BACE protein was purified by anion exchange chromatography, fractions corresponding to the BACE protein containing the peak were buffer exchanged on a XK-50 column (Amersham Pharmacia Biotech) containing 200 ml sephacryl S-200, into 25 mM Tris pH 8.1, 5mM NaCl (Anion loading buffer) and then loaded onto a Resource Q anion exchange column (Amersham Pharmacia Biotech). The protein was eluted with a 35 column volume linear salt gradient from 100% loading buffer to 100% elution buffer (25mM Tris pH8.1, 400mM NaCl). Fractions were pooled based on analysis by SDS-PAGE.

The pooled fractions were dialysed against HIC loading buffer: 50mM Tris pH 8.1, 50mM NaCl, 0.9 M $(NH_4)_2SO_4$. The final sample was then loaded onto a HIC column (Source PHE, Amersham Pharmacia Biotech) equilibrated with HIC loading buffer, and washed to a stable baseline with loading buffer. The differentially processed forms of the BACE generated by proteolytic activity were eluted as separate peaks using a 35 column volume gradient from loading buffer to 50mM Tris pH 8.1, 50mM NaCl.

Peak fractions containing the required form of BACE protein were pooled based on analysis by SDS-PAGE and dialysed against 50mM HEPES pH 8.0, 100mM NaCl, 1Mm DTT.

The dialysed sample was concentrated to a 12ml volume and loaded immediately onto a Sephacryl S-200 column (Amersham Pharmacia Biotech) pre-equilibrated with 50mM HEPES pH 8.0, 100mM NaCl, 1 Mm DTT and stored at 4°C after elution.

The purified BACE eluted from the size exclusion column at the position expected for monomeric protein and was monodisperse when subjected to dynamic light scattering. SDS-PAGE showed the representative samples after the different column steps is shown in Figure 5.

EXAMPLE 2: Crystallization of BACE

A. Crystallization

Crystals of BACE were grown by the hanging drop vapor diffusion method, in which 1µl of protein solution and 1µl of well solution (100mM Tri-sodium citrate, pH 5.8, 200mM ammonium iodide and 18-20% PEG monomethyl ether, 5K) were placed on a cover slip and equilibrated over 1ml of well solution at 20°C. The protein concentration was 5mg/ml in 50mM HEPES, pH 8.0, 150mM NaCl, 1mM DTT. Small prismatic crystals appeared after two days and grew to a maximum size of 0.2mm x 0.1mm x 0.1mm after two weeks. (Figures 3A and B).

Crystals of BACE complexed with OM99-2 (Ghosh et al., 2000) were grown using a similar method. BACE, at a concentration of 0.2mg/ml was mixed with an excess of inhibitor and kept at 4°C for 1 hour. The BACE protein was then concentrated to 5mg/ml using a centricon column with a molecular weight cutoff of 10000, and the crystallization drops set up as before. Crystals with the same morphology as the uncomplexed enzyme appeared after two days and grew to a maximum size of 0.25mm x 0.1mm x 0.1mm.

Both BACE with no inhibitor and BACE in the presence of OM99-2 formed crystals belonging to space group C2 . The cell dimensions for the crystals grown in the presence of OM99-2 (Figure 3A) were a=236.63Å, b= 105.02Å, c=62.59Å and $\beta = 101.32°$, and the asymmetric unit of the crystal contained 3 copies of BACE. The cell dimensions for the crystals grown in the absence of any inhibitor (Figure 3B) were a=238.3Å, b=107.4Å, c=60.4Å, b=101.89°.

Apo-Soaked Crystal Experimental: Crystals of BACE, grown in the absence of inhibitor as previously described were soaked in a solution of inhibitor for 1 hour. The inhibitor was previously dissolved in DMSO to a concentration of 10 mM and then diluted 1 in 10 in the well solution as previously described. 20 microliters of this was placed in a microbridge, and an apo BACE crystal added to it. The microbridge was sealed and incubated for 3.5 hours.

B. Data collection and processing

The structure of BACE as a complex with OM99-2 was solved to 2.6Å using the method of molecular replacement. Data was collected at 100K on crystals frozen in a solution containing a suitable cryoprotectant. The cryoprotectant solution consisted of 100mM Tri-sodium citrate, pH 5.8, 200mM ammonium iodide, 15% PEG monomethyl ether 5K, and 20% PEG 400. The crystal was immersed in the cryoprotectant solution for 30 seconds prior to freezing in liquid nitrogen for the purposes of storage. Data was collected to 2.6Å on beamline ID14-2 at the European

Synchrotron Radiation Facility using a MARCCD detector, with a wavelength of 0.934A and processed using D*trek (Pflugrath, J., 1999). The dataset was scaled using SCALA and the intensities converted to structure factors using TRUNCATE, from the CCP4 suite of programs (Collaborative Computing Project, 1994). Statistics for the processed data are listed in Table 1.

TABLE 1: Data collection statistics for BACE crystallized as a complex with OM99-2.

Resolution	2.6Å
Mosaicity	0.8°
Completeness	95.4%
Multiplicity	1.96
Rmerge	0.087

This table shows that the experimental data used to solve the structure of the BACE/OM99-2 complex was of good quality and sufficient completeness to enable a reliable structure to be derived from it.

Apo-Crystal Experimental: The soaked crystal was then removed, dipped in a solution containing a cryoprotectant mixed with the inhibitor in DMSO, in the same proportions as previously (100 mM Tri-sodium citrate, pH 5.8, 200 mM ammonium iodide, 15% PEG monomethyl ether 5K and 20% PEG 400). The crystal was then frozen as for the OM99-2 crystals and data collected. Data was collected on station ID14-1 at the ESRF using an ADSC detector.

C. Structure Determination and Refinement

The structure of the BACE/OM99-2 complex was solved by molecular replacement using the program AMORE (Navaza, 1994). The molecular replacement solution was not as straightforward application of AMORE. Rather, it involved the use of CCP4, the programs POLARRFN and RFCORR, as well as inventive effort, e.g., to so use this combination and especially to so use RFCORR (Collaborative Computing Project, 1994). The search model was the A chain of 1FKN (Hong et al. 2000) taken from the pdb database (1FKN.pdb); a search radius of 35Å and a resolution range of 8.0-3.0Å being used to give a solution with an Rfactor of 0.38 and a

correlation coefficient of 0.714. This solution was used as a starting point for refinement using the program REFMAC5, also from the CCP4 suite of programs (Collaborative Computing Project, 1994). The inhibitor, OM99-2 was absent from the initial model, and convincing electron density in the active site of all three copies of BACE was observed in difference Fourier maps. This provided confirmation that the solution to the molecular replacement was correct. Cycles of refinement of the structure were alternated with manual rebuilding of the model using QUANTA (1994, San Diego, CA: Molecular Simulations). The N- and C- termini of the molecule were rebuilt, asparagine residues 153, 172, 223 and 354 were remodeled as glutamine residues. The inhibitor molecule was built into the electron density with QUANTA (1994, San Diego, CA: Molecular Simulations), and finally the water molecules were added using DenInt (Astex internal software library). Refinement statistics are shown in Table 2A.

Data collected with apo crystals soaked with inhibitor were processed using D*Trek (Pflugrath, J., 1999), and the intensities converted to structure factors using TRUNCATE, from the CCP4 suite of programs (Collaborative Computing Project, 1994).

The space group of these crystals has changed from the apo form (space group C2) to $P2_1$ with cell dimensions a=62.8, b=106.8Å, c=227.9Å and β=93.63°. The statistics are given in Table 2B below

The structure of the soaked BACE/inhibitor complex was solved by molecular replacement using the programs AMORE (Navaza, 1994). The search model was a monomer from the BACE/OM99-2 structure. A search radius of 35 Å and a resolution range of 12 – 4Å gave a solution with and Rfactor of 0.421 and a correlation coefficient of 0.638. There are 6 monomers in the asymmetric unit. This solution was used as a starting point for refinement using the programs CNX (1999, San Diego, CA: Molecular Simulations) and BUSTER (Bricogne, 1993, Acta Cryst. D49, 37-60). The final refinement statistics are given in Table 2C below.

TABLE 2A: Final refinement statistics for The C2 BACE/OM99-2 complex.

Rwork	0.231
Rfree	0.312
RMS bond deviation from ideality	0.022Å
RMS bond angle deviation from ideality	2.4°
Average Bfactor for structure	53.4Å^2

This data indicates that the final structure is of good quality, the Rfactors indicating that the refined model has a good agreement with the experimental data. The RMS deviations from ideality indicate that the geometry of the model is good and in agreement with previous data.

TABLE 2B: Statistics for $P2_1$ BACE/inhibitor complex

Resolution	3.0 Å
Mosaicity	0.45
Completeness	98%
Multiplicity	2.3
Rmerge	13.8%

The statistics show the space group has changed from the apo-BACE form (space group C2) to $P2_1$ with cell dimensions a=62.8, b=106.8Å, c=227.9Å and β=93.63°

TABLE 2C: Final refinement statistics for $P2_1$ BACE/inhibitor complex.

Rwork	30.3%
Rfree	34.5%
RMS bond deviation from ideality	0.015 Å
RMS bond angle deviation from ideality	1.027°
Average Bfactor for structure	35.6 Å

RESULTS AND DISCUSSION

The final model of the C2 crystal structure of BACE/OM99-2 contained 1161 residues in 3 protein molecules, 3 copies of OM99-2 and 183 ordered water molecules, an Rfactor of 0.231 and a free Rfactor of 0.312. The asymmetric unit contained 3 copies of the BACE molecule (Figures 4A and B), A, B and C, two of which, B and C, form a dimer related by a non-crystallographic two-fold axis. Molecule A forms a similar dimer with its crystallographically related molecule A in an adjacent asymmetric unit. The positions of residues –2 to 385 of all three independent molecules are well defined by the electron density. There is no evidence of density beyond serine –2 for any of the molecules, and the N-terminus of molecules A and C interact with OD1 of asparagine 98 in symmetry related molecules B and A respectively. The N-terminus of molecule B is in a region of solvent. This lack of electron density for all three molecules indicates that the other residues from the N-terminus have no ordered structure. The electron density at the C-terminus ends with residue Asn 385, with no evidence for further terminal residues for the His-tag.

The bilobal structure of individual molecules of BACE as solved in the C2 crystal form, is essentially the same as that of memapsin 2 as solved in the $P2_1$ crystal form. The interactions made by the specific mutations are shown in Table 3. These include the N and C-terminus and the Asn → Gln mutations in each of the three independent units. The mutation of Asn111 to Gln111 appears to be important in the formation of the crystals in that Gln111 of molecule B lies close to the crystallographic two-fold axis and interacts with the symmetry related B:111. Difference electron density was initially seen for OM99-2 in all three molecules, and the inhibitor molecule was fitted to this. Its position was well defined from P4 to P4' for molecules A and C P4' was less well defined in molecule B. The active site is open to solvent for molecules B and C, but that of molecule A is partially occluded (close to P4') by a symmetry related molecule C.

5

TABLE 3: Interactions made by mutated residues in BACE. Monomers A B and C are described in column 1 and the residues with which they interact in column 2.

Mutated or different residue (from Tang sequence)	Interactions formed by mutated or different residue.
A:92	B:142, a crystallographic symmetry related lysine
A:111	No direct interactions
A:162	No direct interactions
A:293	No direct interactions
B:92	No direct interactions
B:111	B:111 symmetry related glutamine, lies on 2-fold
B:162	Close to crystallographic symmetry axis, but no direct interactions
B:293	Points towards solvent channel
C:92	A:142 a crystallographic symmetry related lysine
C:111	No direct interactions
C:162	No direct interactions
C:293	No direct interactions
A:Nterm	Nterm makes interaction with symmetry related OD1 of Asn98B
B:Nterm	Nothing beyond residue ser-2
C:Nterm	N-term makes interaction with symmetry related OD1 of Asn98A
A:Cterm	No interactions
B:Cterm	No interactions
C:Cterm	No interactions.

This table shows that most of the mutations made to the BACE enzyme are at positions which do not affect the crystal packing. The major exception is in the case of residue B111, which is shown to interact across the crystallographic two-fold axis with its symmetry related molecule.

10

TABLE 4: Comparison of Tang/Hong structure with present invention.

Measurement	Tang /Hong	Present Invention
Inhibitor OM99-2	Crystallized in presence of inhibitor OM99-2	Crystallized in presence and absence of OM99-2.
Crystallisation conditions	5mg/ml protein, 5-fold molar excess of OM99-2 0.2M ammonium sulphate,22.5% PEG8K, 0.1M Na-cacodylate, pH 7.4	6mg/ml protein, excess OM99-2, 0.2M ammonium iodide, 20% PEGMME5K, 0.1M tri-sodium citrate, pH 5.6-5.8
Space Group	$P2_1$	C2
Cell dimensions(Å)	a=53.7,b=85.9,109.2,beta=101.4°	a=236.6,b=105.0,c=62.59, beta=101.3°
Resolution	1.9Å	2.6Å
pH of crystallization	7.4	5.8
Molecules in asymmetric unit	2	3
N-terminus	-28p	-33p
C-terminus	No His-tag	His-tag
Mutations	None known	Asn→Gln (glycosylation sites)
Dimer interface	Around N209	Same dimer interface
B:111 environment	solvent exposed	interact across 2-fold axis.
Accessibility of active site	Both molecules accessible	1 accessible, 1 inaccessible, 1 partly accessible
OM99-2 binding mode	As described in Science, 2000 290 150-153	Binding modes similar, but P4' is more ordered.

This further demonstrates that the present invention is novel, nonobvious and inventive over the Tang PCT publications and the Hong Science article.

The following Table 5 provides atomic co-ordinates of BACE.

Table 5: Atomic co-ordinates.

```
HEADER    ----                                        XX-XXX-XX    xxxx
COMPND    ---
REMARK   3
REMARK   3 REFINEMENT.
REMARK   3   PROGRAM     : REFMAC 5.0
REMARK   3
REMARK   3
REMARK   3    REFINEMENT TARGET : MAXIMUM LIKELIHOOD
REMARK   3
REMARK   3  DATA USED IN REFINEMENT.
REMARK   3   RESOLUTION RANGE HIGH (ANGSTROMS) :   2.60
REMARK   3   RESOLUTION RANGE LOW  (ANGSTROMS) : 119.52
REMARK   3   DATA CUTOFF            (SIGMA(F)) : NONE
REMARK   3   COMPLETENESS FOR RANGE        (%) :  93.40
REMARK   3   NUMBER OF REFLECTIONS             :   40971
REMARK   3
REMARK   3  FIT TO DATA USED IN REFINEMENT.
REMARK   3   CROSS-VALIDATION METHOD          : THROUGHOUT
REMARK   3   FREE R VALUE TEST SET SELECTION  : RANDOM
REMARK   3   R VALUE     (WORKING + TEST SET) : 0.23480
REMARK   3   R VALUE            (WORKING SET) :  0.23064
REMARK   3   FREE R VALUE                      :  0.31230
REMARK   3   FREE R VALUE TEST SET SIZE   (%) :  5.1
REMARK   3   FREE R VALUE TEST SET COUNT       :  2184
REMARK   3
REMARK   3  FIT IN THE HIGHEST RESOLUTION BIN.
REMARK   3   TOTAL NUMBER OF BINS USED           :      20
REMARK   3   BIN RESOLUTION RANGE HIGH           :   2.601
REMARK   3   BIN RESOLUTION RANGE LOW            :   2.668
REMARK   3   REFLECTION IN BIN     (WORKING SET) :    2799
REMARK   3   BIN R VALUE           (WORKING SET) :   0.282
REMARK   3   BIN FREE R VALUE SET COUNT          :     145
REMARK   3   BIN FREE R VALUE                    :   0.403
REMARK   3
REMARK   3  NUMBER OF NON-HYDROGEN ATOMS USED IN REFINEMENT.
REMARK   3   ALL ATOMS                 :     9531
REMARK   3
REMARK   3  B VALUES.
REMARK   3   FROM WILSON PLOT           (A**2) : NULL
REMARK   3   MEAN B VALUE      (OVERALL, A**2) :  50.041
REMARK   3   OVERALL ANISOTROPIC B VALUE.
REMARK   3    B11 (A**2) :    -4.02
REMARK   3    B22 (A**2) :    -0.68
REMARK   3    B33 (A**2) :     4.60
REMARK   3    B12 (A**2) :     0.00
REMARK   3    B13 (A**2) :    -0.24
REMARK   3    B23 (A**2) :     0.00
REMARK   3
REMARK   3  ESTIMATED OVERALL COORDINATE ERROR.
REMARK   3   ESU BASED ON R VALUE                                (A):   1.142
REMARK   3   ESU BASED ON FREE R VALUE                           (A):   0.408
REMARK   3   ESU BASED ON MAXIMUM LIKELIHOOD                     (A):   0.512
REMARK   3   ESU FOR B VALUES BASED ON MAXIMUM LIKELIHOOD (A**2):  23.746
REMARK   3
REMARK   3 CORRELATION COEFFICIENTS.
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REMARK   3   CORRELATION COEFFICIENT FO-FC      :   0.925
REMARK   3   CORRELATION COEFFICIENT FO-FC FREE :   0.866
REMARK   3
REMARK   3  RMS DEVIATIONS FROM IDEAL VALUES         COUNT    RMS     WEIGHT
REMARK   3   BOND LENGTHS REFINED ATOMS        (A):  9582 ; 0.022 ; 0.021
REMARK   3   BOND LENGTHS OTHERS               (A):  8445 ; 0.001 ; 0.020
REMARK   3   BOND ANGLES REFINED ATOMS   (DEGREES): 13011 ; 2.356 ; 1.945
REMARK   3   BOND ANGLES OTHERS          (DEGREES): 19641 ; 0.973 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 1    (DEGREES):  1173 ; 6.207 ; 3.000
REMARK   3   TORSION ANGLES, PERIOD 3    (DEGREES):  1607 ;21.762 ;15.000
REMARK   3   CHIRAL-CENTER RESTRAINTS      (A**3):  1422 ; 0.121 ; 0.200
REMARK   3   GENERAL PLANES REFINED ATOMS      (A): 10704 ; 0.003 ; 0.020
REMARK   3   GENERAL PLANES OTHERS             (A):  2010 ; 0.001 ; 0.020
REMARK   3   NON-BONDED CONTACTS REFINED ATOMS (A):  2679 ; 0.339 ; 0.300
REMARK   3   NON-BONDED CONTACTS OTHERS        (A):  9125 ; 0.264 ; 0.300
REMARK   3   NON-BONDED TORSION OTHERS         (A):     3 ; 0.093 ; 0.500
REMARK   3   H-BOND (X...Y) REFINED ATOMS      (A):   834 ; 0.226 ; 0.500
REMARK   3   H-BOND (X...Y) OTHERS             (A):    35 ; 0.161 ; 0.500
REMARK   3   SYMMETRY VDW REFINED ATOMS        (A):    20 ; 0.299 ; 0.300
REMARK   3   SYMMETRY VDW OTHERS               (A):    62 ; 0.395 ; 0.300
REMARK   3   SYMMETRY H-BOND REFINED ATOMS     (A):    10 ; 0.351 ; 0.500
REMARK   3   SYMMETRY H-BOND OTHERS            (A):     2 ; 0.229 ; 0.500
REMARK   3
REMARK   3  ISOTROPIC THERMAL FACTOR RESTRAINTS.     COUNT    RMS     WEIGHT
REMARK   3   MAIN-CHAIN BOND REFINED ATOMS (A**2):  5889 ; 3.453 ; 5.000
REMARK   3   MAIN-CHAIN ANGLE REFINED ATOMS (A**2): 9501 ; 5.002 ; 6.000
REMARK   3   SIDE-CHAIN BOND REFINED ATOMS (A**2):  3693 ; 4.504 ; 6.000
REMARK   3   SIDE-CHAIN ANGLE REFINED ATOMS (A**2): 3510 ; 6.644 ; 7.500
REMARK   3
REMARK   3  NCS RESTRAINTS STATISTICS
REMARK   3   NUMBER OF NCS GROUPS : NULL
REMARK   3
REMARK   3
REMARK   3  TLS DETAILS
REMARK   3   NUMBER OF TLS GROUPS  : NULL
REMARK   3
REMARK   3
REMARK   3  BULK SOLVENT MODELLING.
REMARK   3   METHOD USED : BABINET MODEL WITH MASK
REMARK   3   PARAMETERS FOR MASK CALCULATION
REMARK   3   VDW PROBE RADIUS   :  1.40
REMARK   3   ION PROBE RADIUS   :  0.80
REMARK   3   SHRINKAGE RADIUS   :  0.80
REMARK   3
REMARK   3  OTHER REFINEMENT REMARKS:
REMARK   3  HYDROGENS HAVE BEEN ADDED IN THE RIDING POSITIONS
REMARK   3
CISPEP   1 SER A   22    PRO A   23                     0.00
CISPEP   2 ARG A  128    PRO A  129                     0.00
CISPEP   3 GLY A  372    PRO A  373                     0.00
SSBOND   1 CYS A  155    CYS A  359
SSBOND   2 CYS A  217    CYS A  382
SSBOND   3 CYS A  269    CYS A  319
CISPEP   4 SER B   22    PRO B   23                     0.00
CISPEP   5 ARG B  128    PRO B  129                     0.00
CISPEP   6 GLY B  372    PRO B  373                     0.00
SSBOND   4 CYS B  155    CYS B  359
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SSBOND   5 CYS B  217    CYS B  382
SSBOND   6 CYS B  269    CYS B  319
CISPEP   7 SER C   22    PRO C   23                    0.00
CISPEP   8 ARG C  128    PRO C  129                    0.00
CISPEP   9 GLY C  372    PRO C  373                    0.00
SSBOND   7 CYS C  155    CYS C  359
SSBOND   8 CYS C  217    CYS C  382
SSBOND   9 CYS C  269    CYS C  319
CRYST1  236.630  105.020   62.590  90.00 101.32  90.00 C 1 2 1
SCALE1      0.004226  0.000000  0.000846        0.00000
SCALE2      0.000000  0.009522  0.000000        0.00000
SCALE3      0.000000  0.000000  0.016294        0.00000
ATOM      1  N   SER A  -2      17.150 -22.147  12.324  1.00 34.66           N
ATOM      3  CA  SER A  -2      18.119 -22.435  11.206  1.00 39.63           C
ATOM      5  CB  SER A  -2      17.523 -22.274   9.764  1.00 43.29           C
ATOM      8  OG  SER A  -2      17.135 -20.963   9.336  1.00 46.72           O
ATOM     10  C   SER A  -2      19.507 -21.833  11.428  1.00 41.17           C
ATOM     11  O   SER A  -2      20.479 -22.532  11.183  1.00 58.68           O
ATOM     14  N   PHE A  -1      19.649 -20.573  11.846  1.00 44.17           N
ATOM     16  CA  PHE A  -1      20.910 -20.078  12.436  1.00 38.71           C
ATOM     18  CB  PHE A  -1      21.526 -19.134  11.408  1.00 40.94           C
ATOM     21  CG  PHE A  -1      21.855 -19.846  10.113  1.00 34.80           C
ATOM     22  CD1 PHE A  -1      20.860 -20.099   9.181  1.00 33.03           C
ATOM     24  CE1 PHE A  -1      21.162 -20.772   8.020  1.00 44.01           C
ATOM     26  CZ  PHE A  -1      22.473 -21.212   7.783  1.00 40.67           C
ATOM     28  CE2 PHE A  -1      23.455 -20.971   8.704  1.00 41.60           C
ATOM     30  CD2 PHE A  -1      23.146 -20.297   9.864  1.00 41.30           C
ATOM     32  C   PHE A  -1      20.809 -19.447  13.873  1.00 48.71           C
ATOM     33  O   PHE A  -1      21.220 -18.282  14.082  1.00 52.36           O
ATOM     34  N   VAL A   0      20.309 -20.241  14.848  1.00 50.55           N
ATOM     36  CA  VAL A   0      19.944 -19.816  16.243  1.00 50.67           C
ATOM     38  CB  VAL A   0      19.252 -20.960  17.037  1.00 54.02           C
ATOM     40  CG1 VAL A   0      17.851 -21.180  16.565  1.00 59.81           C
ATOM     44  CG2 VAL A   0      20.016 -22.211  16.926  1.00 54.45           C
ATOM     48  C   VAL A   0      21.047 -19.362  17.171  1.00 47.63           C
ATOM     49  O   VAL A   0      20.864 -18.642  18.174  1.00 47.19           O
ATOM     50  N   GLU A   1      22.195 -19.867  16.855  1.00 47.53           N
ATOM     52  CA  GLU A   1      23.444 -19.407  17.410  1.00 45.35           C
ATOM     54  CB  GLU A   1      24.489 -19.994  16.474  1.00 46.47           C
ATOM     57  CG  GLU A   1      23.893 -20.218  15.070  1.00 37.41           C
ATOM     60  CD  GLU A   1      24.627 -21.224  14.257  1.00 36.90           C
ATOM     61  OE1 GLU A   1      23.964 -21.926  13.487  1.00 29.13           O
ATOM     62  OE2 GLU A   1      25.868 -21.304  14.382  1.00 44.61           O
ATOM     63  C   GLU A   1      23.573 -17.933  17.273  1.00 44.07           C
ATOM     64  O   GLU A   1      23.950 -17.227  18.185  1.00 47.47           O
ATOM     65  N   MET A   2      23.211 -17.471  16.087  1.00 48.56           N
ATOM     67  CA  MET A   2      23.536 -16.135  15.628  1.00 44.26           C
ATOM     69  CB  MET A   2      23.886 -16.271  14.156  1.00 46.78           C
ATOM     72  CG  MET A   2      24.968 -17.287  13.979  1.00 46.07           C
ATOM     75  SD  MET A   2      25.968 -17.107  12.614  1.00 44.85           S
ATOM     76  CE  MET A   2      25.329 -18.379  11.580  1.00 47.63           C
ATOM     80  C   MET A   2      22.441 -15.143  15.782  1.00 44.93           C
ATOM     81  O   MET A   2      22.694 -13.949  15.928  1.00 44.66           O
ATOM     82  N   VAL A   3      21.213 -15.640  15.739  1.00 44.93           N
ATOM     84  CA  VAL A   3      20.054 -14.792  15.864  1.00 42.74           C
ATOM     86  CB  VAL A   3      18.787 -15.658  15.886  1.00 41.67           C
ATOM     88  CG1 VAL A   3      17.725 -15.033  16.713  1.00 37.90           C
```

ATOM	92	CG2	VAL	A	3	18.319	-15.879	14.506	1.00	37.99	C
ATOM	96	C	VAL	A	3	20.178	-14.009	17.153	1.00	43.63	C
ATOM	97	O	VAL	A	3	20.474	-14.592	18.164	1.00	38.26	O
ATOM	98	N	ASP	A	4	19.953	-12.696	17.100	1.00	45.42	N
ATOM	100	CA	ASP	A	4	20.026	-11.823	18.267	1.00	45.76	C
ATOM	102	CB	ASP	A	4	19.330	-12.445	19.482	1.00	53.20	C
ATOM	105	CG	ASP	A	4	17.803	-12.638	19.299	1.00	65.48	C
ATOM	106	OD1	ASP	A	4	17.222	-13.367	20.153	1.00	74.58	O
ATOM	107	OD2	ASP	A	4	17.098	-12.144	18.367	1.00	62.82	O
ATOM	108	C	ASP	A	4	21.417	-11.521	18.742	1.00	45.27	C
ATOM	109	O	ASP	A	4	21.561	-11.253	19.923	1.00	50.54	O
ATOM	110	N	ASN	A	5	22.446	-11.539	17.888	1.00	41.26	N
ATOM	112	CA	ASN	A	5	23.800	-11.339	18.387	1.00	35.44	C
ATOM	114	CB	ASN	A	5	24.717	-12.331	17.728	1.00	37.18	C
ATOM	117	CG	ASN	A	5	24.759	-12.137	16.262	1.00	39.34	C
ATOM	118	OD1	ASN	A	5	23.857	-11.544	15.736	1.00	38.77	O
ATOM	119	ND2	ASN	A	5	25.811	-12.618	15.586	1.00	35.75	N
ATOM	122	C	ASN	A	5	24.387	-9.939	18.228	1.00	38.11	C
ATOM	123	O	ASN	A	5	25.585	-9.733	18.468	1.00	37.36	O
ATOM	124	N	LEU	A	6	23.549	-8.980	17.833	1.00	38.41	N
ATOM	126	CA	LEU	A	6	23.939	-7.572	17.679	1.00	33.19	C
ATOM	128	CB	LEU	A	6	23.468	-7.098	16.340	1.00	26.93	C
ATOM	131	CG	LEU	A	6	24.086	-7.474	15.007	1.00	27.79	C
ATOM	133	CD1	LEU	A	6	23.717	-6.361	14.059	1.00	27.07	C
ATOM	137	CD2	LEU	A	6	25.567	-7.678	14.998	1.00	22.82	C
ATOM	141	C	LEU	A	6	23.293	-6.664	18.756	1.00	36.63	C
ATOM	142	O	LEU	A	6	22.262	-7.002	19.284	1.00	46.36	O
ATOM	143	N	ARG	A	7	23.875	-5.513	19.075	1.00	41.26	N
ATOM	145	CA	ARG	A	7	23.290	-4.554	20.038	1.00	40.38	C
ATOM	147	CB	ARG	A	7	23.833	-4.740	21.451	1.00	44.61	C
ATOM	150	CG	ARG	A	7	23.137	-5.889	22.209	1.00	57.60	C
ATOM	153	CD	ARG	A	7	23.680	-6.233	23.630	1.00	65.11	C
ATOM	156	NE	ARG	A	7	25.141	-6.399	23.667	1.00	76.98	N
ATOM	158	CZ	ARG	A	7	25.947	-6.088	24.706	1.00	82.43	C
ATOM	159	NH1	ARG	A	7	25.468	-5.589	25.845	1.00	83.89	N
ATOM	162	NH2	ARG	A	7	27.256	-6.284	24.603	1.00	82.28	N
ATOM	165	C	ARG	A	7	23.627	-3.196	19.506	1.00	37.09	C
ATOM	166	O	ARG	A	7	24.329	-3.119	18.506	1.00	39.77	O
ATOM	167	N	GLY	A	8	23.139	-2.136	20.139	1.00	41.94	N
ATOM	169	CA	GLY	A	8	23.316	-0.770	19.642	1.00	46.85	C
ATOM	172	C	GLY	A	8	22.093	-0.084	18.994	1.00	53.78	C
ATOM	173	O	GLY	A	8	20.926	-0.485	19.254	1.00	49.83	O
ATOM	174	N	LYS	A	9	22.345	0.968	18.169	1.00	56.06	N
ATOM	176	CA	LYS	A	9	21.272	1.585	17.372	1.00	58.92	C
ATOM	178	CB	LYS	A	9	20.312	2.324	18.314	1.00	65.60	C
ATOM	181	CG	LYS	A	9	20.817	3.673	18.821	1.00	71.58	C
ATOM	184	CD	LYS	A	9	19.785	4.339	19.712	1.00	76.80	C
ATOM	187	CE	LYS	A	9	20.460	5.364	20.645	1.00	81.30	C
ATOM	190	NZ	LYS	A	9	19.689	5.694	21.898	1.00	79.59	N
ATOM	194	C	LYS	A	9	21.662	2.497	16.157	1.00	57.10	C
ATOM	195	O	LYS	A	9	22.801	2.893	15.996	1.00	53.27	O
ATOM	196	N	SER	A	10	20.691	2.865	15.312	1.00	58.39	N
ATOM	198	CA	SER	A	10	21.022	3.699	14.153	1.00	59.37	C
ATOM	200	CB	SER	A	10	19.791	4.146	13.417	1.00	63.36	C
ATOM	203	OG	SER	A	10	18.789	4.510	14.345	1.00	73.85	O
ATOM	205	C	SER	A	10	21.724	4.919	14.635	1.00	61.22	C
ATOM	206	O	SER	A	10	22.617	5.434	13.956	1.00	64.24	O

ATOM	207	N	GLY	A	11	21.279	5.370	15.818	1.00	60.57	N
ATOM	209	CA	GLY	A	11	21.807	6.519	16.499	1.00	49.93	C
ATOM	212	C	GLY	A	11	23.308	6.455	16.511	1.00	53.46	C
ATOM	213	O	GLY	A	11	23.952	7.390	16.020	1.00	42.23	O
ATOM	214	N	GLN	A	12	23.864	5.357	17.052	1.00	51.87	N
ATOM	216	CA	GLN	A	12	25.313	5.236	17.206	1.00	51.01	C
ATOM	218	CB	GLN	A	12	25.656	5.405	18.653	1.00	50.53	C
ATOM	221	CG	GLN	A	12	25.254	6.733	19.190	1.00	53.21	C
ATOM	224	CD	GLN	A	12	25.455	6.803	20.686	1.00	53.35	C
ATOM	225	OE1	GLN	A	12	25.155	5.827	21.393	1.00	51.66	O
ATOM	226	NE2	GLN	A	12	25.960	7.941	21.174	1.00	44.80	N
ATOM	229	C	GLN	A	12	25.939	3.922	16.774	1.00	54.07	C
ATOM	230	O	GLN	A	12	27.027	3.567	17.245	1.00	62.50	O
ATOM	231	N	GLY	A	13	25.264	3.200	15.897	1.00	49.53	N
ATOM	233	CA	GLY	A	13	25.763	1.941	15.424	1.00	43.84	C
ATOM	236	C	GLY	A	13	25.250	0.639	16.051	1.00	44.95	C
ATOM	237	O	GLY	A	13	24.875	0.584	17.216	1.00	46.26	O
ATOM	238	N	TYR	A	14	25.256	-0.415	15.219	1.00	37.84	N
ATOM	240	CA	TYR	A	14	25.070	-1.777	15.613	1.00	38.80	C
ATOM	242	CB	TYR	A	14	24.228	-2.432	14.566	1.00	43.50	C
ATOM	245	CG	TYR	A	14	22.871	-1.882	14.579	1.00	40.77	C
ATOM	246	CD1	TYR	A	14	22.592	-0.703	13.951	1.00	43.94	C
ATOM	248	CE1	TYR	A	14	21.372	-0.202	13.967	1.00	47.36	C
ATOM	250	CZ	TYR	A	14	20.411	-0.876	14.617	1.00	48.18	C
ATOM	251	OH	TYR	A	14	19.178	-0.405	14.638	1.00	49.40	O
ATOM	253	CE2	TYR	A	14	20.659	-2.045	15.246	1.00	45.91	C
ATOM	255	CD2	TYR	A	14	21.883	-2.532	15.224	1.00	39.22	C
ATOM	257	C	TYR	A	14	26.388	-2.532	15.658	1.00	39.26	C
ATOM	258	O	TYR	A	14	27.167	-2.474	14.703	1.00	42.82	O
ATOM	259	N	TYR	A	15	26.610	-3.291	16.734	1.00	38.03	N
ATOM	261	CA	TYR	A	15	27.905	-3.917	16.966	1.00	33.51	C
ATOM	263	CB	TYR	A	15	28.655	-2.978	17.885	1.00	35.56	C
ATOM	266	CG	TYR	A	15	28.090	-2.934	19.303	1.00	38.03	C
ATOM	267	CD1	TYR	A	15	28.139	-4.052	20.116	1.00	40.86	C
ATOM	269	CE1	TYR	A	15	27.641	-4.030	21.388	1.00	42.66	C
ATOM	271	CZ	TYR	A	15	27.086	-2.892	21.882	1.00	43.41	C
ATOM	272	OH	TYR	A	15	26.593	-2.912	23.176	1.00	40.43	O
ATOM	274	CE2	TYR	A	15	27.023	-1.757	21.096	1.00	41.62	C
ATOM	276	CD2	TYR	A	15	27.522	-1.787	19.816	1.00	38.35	C
ATOM	278	C	TYR	A	15	27.828	-5.307	17.605	1.00	32.70	C
ATOM	279	O	TYR	A	15	26.901	-5.608	18.296	1.00	33.91	O
ATOM	280	N	VAL	A	16	28.832	-6.148	17.398	1.00	38.82	N
ATOM	282	CA	VAL	A	16	28.763	-7.554	17.781	1.00	36.77	C
ATOM	284	CB	VAL	A	16	28.826	-8.444	16.556	1.00	41.62	C
ATOM	286	CG1	VAL	A	16	30.280	-8.691	16.154	1.00	41.85	C
ATOM	290	CG2	VAL	A	16	28.212	-9.788	16.804	1.00	46.15	C
ATOM	294	C	VAL	A	16	29.993	-7.861	18.579	1.00	37.30	C
ATOM	295	O	VAL	A	16	30.995	-7.188	18.388	1.00	37.00	O
ATOM	296	N	GLU	A	17	29.898	-8.861	19.461	1.00	32.42	N
ATOM	298	CA	GLU	A	17	30.974	-9.315	20.309	1.00	37.70	C
ATOM	300	CB	GLU	A	17	30.339	-10.181	21.407	1.00	41.03	C
ATOM	303	CG	GLU	A	17	31.155	-10.529	22.669	1.00	41.42	C
ATOM	306	CD	GLU	A	17	30.339	-11.380	23.676	1.00	53.52	C
ATOM	307	OE1	GLU	A	17	29.191	-10.947	24.041	1.00	62.24	O
ATOM	308	OE2	GLU	A	17	30.807	-12.484	24.114	1.00	47.86	O
ATOM	309	C	GLU	A	17	32.000	-10.162	19.538	1.00	39.46	C
ATOM	310	O	GLU	A	17	31.637	-11.032	18.796	1.00	39.58	O

ATOM	311	N	MET	A	18	33.292	-9.925	19.711	1.00 44.75	N
ATOM	313	CA	MET	A	18	34.301	-10.791	19.082	1.00 41.54	C
ATOM	315	CB	MET	A	18	34.838	-10.160	17.802	1.00 41.81	C
ATOM	318	CG	MET	A	18	33.836	-9.447	16.939	1.00 41.86	C
ATOM	321	SD	MET	A	18	34.600	-8.833	15.425	1.00 50.01	S
ATOM	322	CE	MET	A	18	35.054	-10.282	14.687	1.00 45.99	C
ATOM	326	C	MET	A	18	35.466	-10.864	20.038	1.00 43.74	C
ATOM	327	O	MET	A	18	35.596	-10.003	20.877	1.00 49.03	O
ATOM	328	N	THR	A	19	36.325	-11.868	19.937	1.00 45.52	N
ATOM	330	CA	THR	A	19	37.572	-11.813	20.698	1.00 45.53	C
ATOM	332	CB	THR	A	19	37.747	-13.023	21.572	1.00 45.33	C
ATOM	334	OG1	THR	A	19	38.226	-14.108	20.759	1.00 50.86	O
ATOM	336	CG2	THR	A	19	36.463	-13.451	22.142	1.00 40.03	C
ATOM	340	C	THR	A	19	38.763	-11.893	19.814	1.00 45.19	C
ATOM	341	O	THR	A	19	38.693	-12.560	18.785	1.00 47.81	O
ATOM	342	N	VAL	A	20	39.865	-11.267	20.243	1.00 46.54	N
ATOM	344	CA	VAL	A	20	41.181	-11.385	19.556	1.00 46.08	C
ATOM	346	CB	VAL	A	20	41.657	-10.076	19.031	1.00 44.11	C
ATOM	348	CG1	VAL	A	20	40.734	-9.589	17.998	1.00 51.93	C
ATOM	352	CG2	VAL	A	20	41.687	-9.058	20.110	1.00 51.31	C
ATOM	356	C	VAL	A	20	42.286	-11.858	20.490	1.00 48.60	C
ATOM	357	O	VAL	A	20	42.242	-11.643	21.715	1.00 49.22	O
ATOM	358	N	GLY	A	21	43.293	-12.505	19.944	1.00 49.38	N
ATOM	360	CA	GLY	A	21	44.406	-12.881	20.791	1.00 51.59	C
ATOM	363	C	GLY	A	21	44.282	-14.129	21.652	1.00 51.96	C
ATOM	364	O	GLY	A	21	43.216	-14.659	21.926	1.00 48.04	O
ATOM	365	N	SER	A	22	45.430	-14.604	22.087	1.00 51.50	N
ATOM	367	CA	SER	A	22	45.462	-15.754	22.916	1.00 54.86	C
ATOM	369	CB	SER	A	22	46.238	-16.846	22.176	1.00 58.86	C
ATOM	372	OG	SER	A	22	45.861	-16.909	20.794	1.00 60.35	O
ATOM	374	C	SER	A	22	46.156	-15.336	24.203	1.00 54.80	C
ATOM	375	O	SER	A	22	47.217	-14.720	24.127	1.00 53.24	O
ATOM	376	N	PRO	A	23	45.551	-15.566	25.378	1.00 54.99	N
ATOM	377	CA	PRO	A	23	44.141	-15.954	25.547	1.00 56.89	C
ATOM	379	CB	PRO	A	23	43.945	-15.868	27.056	1.00 54.92	C
ATOM	382	CG	PRO	A	23	45.075	-15.007	27.510	1.00 52.28	C
ATOM	385	CD	PRO	A	23	46.218	-15.491	26.680	1.00 53.62	C
ATOM	388	C	PRO	A	23	43.244	-14.889	24.943	1.00 56.89	C
ATOM	389	O	PRO	A	23	43.808	-13.858	24.604	1.00 57.85	O
ATOM	390	N	PRO	A	24	41.931	-15.125	24.840	1.00 56.03	N
ATOM	391	CA	PRO	A	24	40.963	-14.220	24.217	1.00 52.69	C
ATOM	393	CB	PRO	A	24	39.667	-15.023	24.276	1.00 52.70	C
ATOM	396	CG	PRO	A	24	40.058	-16.369	24.440	1.00 55.89	C
ATOM	399	CD	PRO	A	24	41.259	-16.335	25.325	1.00 57.99	C
ATOM	402	C	PRO	A	24	40.697	-12.963	24.971	1.00 52.11	C
ATOM	403	O	PRO	A	24	40.598	-13.028	26.170	1.00 56.31	O
ATOM	404	N	GLN	A	25	40.558	-11.856	24.261	1.00 53.37	N
ATOM	406	CA	GLN	A	25	40.215	-10.568	24.839	1.00 54.86	C
ATOM	408	CB	GLN	A	25	41.290	-9.528	24.531	1.00 55.07	C
ATOM	411	CG	GLN	A	25	42.627	-9.938	24.959	1.00 57.87	C
ATOM	414	CD	GLN	A	25	43.630	-8.867	24.743	1.00 56.36	C
ATOM	415	OE1	GLN	A	25	43.283	-7.691	24.741	1.00 56.87	O
ATOM	416	NE2	GLN	A	25	44.888	-9.263	24.561	1.00 48.88	N
ATOM	419	C	GLN	A	25	38.946	-10.098	24.168	1.00 54.86	C
ATOM	420	O	GLN	A	25	38.936	-9.799	22.968	1.00 58.85	O
ATOM	421	N	THR	A	26	37.883	-10.006	24.944	1.00 52.85	N
ATOM	423	CA	THR	A	26	36.604	-9.597	24.436	1.00 50.69	C

ATOM	425	CB	THR	A	26	35.614	-9.763	25.531	1.00	49.93	C
ATOM	427	OG1	THR	A	26	35.404	-11.164	25.799	1.00	53.75	O
ATOM	429	CG2	THR	A	26	34.308	-9.246	25.060	1.00	46.30	C
ATOM	433	C	THR	A	26	36.575	-8.146	24.003	1.00	51.52	C
ATOM	434	O	THR	A	26	37.078	-7.284	24.696	1.00	59.94	O
ATOM	435	N	LEU	A	27	35.982	-7.856	22.858	1.00	49.68	N
ATOM	437	CA	LEU	A	27	35.858	-6.476	22.412	1.00	39.53	C
ATOM	439	CB	LEU	A	27	37.066	-6.094	21.592	1.00	42.69	C
ATOM	442	CG	LEU	A	27	38.456	-5.850	22.241	1.00	44.73	C
ATOM	444	CD1	LEU	A	27	39.404	-5.301	21.192	1.00	42.23	C
ATOM	448	CD2	LEU	A	27	38.418	-4.865	23.382	1.00	44.45	C
ATOM	452	C	LEU	A	27	34.615	-6.390	21.574	1.00	40.04	C
ATOM	453	O	LEU	A	27	34.313	-7.319	20.821	1.00	40.69	O
ATOM	454	N	ASN	A	28	33.859	-5.305	21.704	1.00	43.27	N
ATOM	456	CA	ASN	A	28	32.654	-5.129	20.873	1.00	43.26	C
ATOM	458	CB	ASN	A	28	31.509	-4.465	21.654	1.00	45.19	C
ATOM	461	CG	ASN	A	28	30.830	-5.417	22.672	1.00	44.78	C
ATOM	462	OD1	ASN	A	28	30.936	-5.234	23.888	1.00	47.19	O
ATOM	463	ND2	ASN	A	28	30.123	-6.411	22.174	1.00	42.58	N
ATOM	466	C	ASN	A	28	33.018	-4.308	19.633	1.00	45.28	C
ATOM	467	O	ASN	A	28	33.476	-3.172	19.775	1.00	46.40	O
ATOM	468	N	ILE	A	29	32.795	-4.911	18.450	1.00	46.88	N
ATOM	470	CA	ILE	A	29	33.115	-4.400	17.094	1.00	44.20	C
ATOM	472	CB	ILE	A	29	33.690	-5.561	16.303	1.00	43.47	C
ATOM	474	CG1	ILE	A	29	34.737	-6.291	17.121	1.00	43.10	C
ATOM	477	CD1	ILE	A	29	35.870	-5.421	17.574	1.00	44.94	C
ATOM	481	CG2	ILE	A	29	34.248	-5.079	14.973	1.00	46.96	C
ATOM	485	C	ILE	A	29	31.942	-3.874	16.222	1.00	41.20	C
ATOM	486	O	ILE	A	29	30.951	-4.502	16.068	1.00	36.51	O
ATOM	487	N	LEU	A	30	32.084	-2.715	15.617	1.00	44.61	N
ATOM	489	CA	LEU	A	30	31.023	-2.165	14.783	1.00	41.39	C
ATOM	491	CB	LEU	A	30	31.284	-0.684	14.562	1.00	36.72	C
ATOM	494	CG	LEU	A	30	30.022	0.080	14.326	1.00	38.55	C
ATOM	496	CD1	LEU	A	30	29.865	1.229	15.255	1.00	44.29	C
ATOM	500	CD2	LEU	A	30	30.137	0.569	12.982	1.00	43.51	C
ATOM	504	C	LEU	A	30	30.885	-2.911	13.455	1.00	40.85	C
ATOM	505	O	LEU	A	30	31.851	-3.397	12.897	1.00	45.44	O
ATOM	506	N	VAL	A	31	29.662	-2.996	12.953	1.00	43.56	N
ATOM	508	CA	VAL	A	31	29.362	-3.774	11.762	1.00	42.56	C
ATOM	510	CB	VAL	A	31	28.116	-4.562	12.003	1.00	44.28	C
ATOM	512	CG1	VAL	A	31	27.424	-4.814	10.739	1.00	46.25	C
ATOM	516	CG2	VAL	A	31	28.472	-5.868	12.644	1.00	48.98	C
ATOM	520	C	VAL	A	31	29.137	-2.803	10.621	1.00	42.04	C
ATOM	521	O	VAL	A	31	28.088	-2.172	10.588	1.00	46.43	O
ATOM	522	N	ASP	A	32	30.113	-2.699	9.704	1.00	38.37	N
ATOM	524	CA	ASP	A	32	30.170	-1.655	8.699	1.00	36.43	C
ATOM	526	CB	ASP	A	32	31.409	-0.852	8.922	1.00	41.59	C
ATOM	529	CG	ASP	A	32	31.371	0.375	8.151	1.00	46.08	C
ATOM	530	OD1	ASP	A	32	30.241	0.877	8.185	1.00	58.39	O
ATOM	531	OD2	ASP	A	32	32.299	0.905	7.467	1.00	43.43	O
ATOM	532	C	ASP	A	32	30.308	-2.118	7.291	1.00	36.03	C
ATOM	533	O	ASP	A	32	31.379	-2.416	6.890	1.00	36.16	O
ATOM	534	N	THR	A	33	29.238	-2.174	6.520	1.00	35.12	N
ATOM	536	CA	THR	A	33	29.341	-2.680	5.164	1.00	36.24	C
ATOM	538	CB	THR	A	33	27.969	-3.180	4.660	1.00	40.04	C
ATOM	540	OG1	THR	A	33	26.982	-2.136	4.794	1.00	44.25	O
ATOM	542	CG2	THR	A	33	27.453	-4.347	5.575	1.00	40.43	C

ATOM	546	C	THR	A	33	29.829	-1.581	4.301	1.00	33.30	C
ATOM	547	O	THR	A	33	29.893	-1.701	3.085	1.00	35.29	O
ATOM	548	N	GLY	A	34	30.177	-0.493	4.946	1.00	31.75	N
ATOM	550	CA	GLY	A	34	30.601	0.715	4.245	1.00	36.33	C
ATOM	553	C	GLY	A	34	32.077	0.844	4.160	1.00	39.91	C
ATOM	554	O	GLY	A	34	32.531	1.605	3.314	1.00	50.07	O
ATOM	555	N	SER	A	35	32.814	0.107	5.004	1.00	37.10	N
ATOM	557	CA	SER	A	35	34.228	0.032	4.901	1.00	34.40	C
ATOM	559	CB	SER	A	35	34.823	0.796	6.021	1.00	36.88	C
ATOM	562	OG	SER	A	35	34.960	-0.016	7.136	1.00	40.38	O
ATOM	564	C	SER	A	35	34.785	-1.406	4.922	1.00	37.08	C
ATOM	565	O	SER	A	35	34.045	-2.332	5.176	1.00	32.07	O
ATOM	566	N	SER	A	36	36.104	-1.546	4.668	1.00	37.61	N
ATOM	568	CA	SER	A	36	36.836	-2.824	4.521	1.00	38.67	C
ATOM	570	CB	SER	A	36	37.384	-2.903	3.110	1.00	39.52	C
ATOM	573	OG	SER	A	36	36.354	-2.718	2.156	1.00	47.74	O
ATOM	575	C	SER	A	36	38.079	-3.054	5.406	1.00	41.95	C
ATOM	576	O	SER	A	36	38.978	-3.850	5.074	1.00	42.44	O
ATOM	577	N	ASN	A	37	38.162	-2.374	6.526	1.00	35.87	N
ATOM	579	CA	ASN	A	37	39.299	-2.563	7.336	1.00	30.94	C
ATOM	581	CB	ASN	A	37	39.969	-1.216	7.505	1.00	36.25	C
ATOM	584	CG	ASN	A	37	41.020	-0.997	6.507	1.00	35.00	C
ATOM	585	OD1	ASN	A	37	40.726	-0.519	5.452	1.00	41.51	O
ATOM	586	ND2	ASN	A	37	42.275	-1.379	6.819	1.00	35.89	N
ATOM	589	C	ASN	A	37	38.876	-3.085	8.679	1.00	30.50	C
ATOM	590	O	ASN	A	37	37.991	-2.530	9.247	1.00	34.21	O
ATOM	591	N	PHE	A	38	39.478	-4.157	9.184	1.00	36.14	N
ATOM	593	CA	PHE	A	38	39.180	-4.625	10.545	1.00	36.42	C
ATOM	595	CB	PHE	A	38	39.256	-6.146	10.663	1.00	33.72	C
ATOM	598	CG	PHE	A	38	38.886	-6.678	12.040	1.00	43.00	C
ATOM	599	CD1	PHE	A	38	39.713	-7.566	12.705	1.00	42.48	C
ATOM	601	CE1	PHE	A	38	39.386	-8.040	13.962	1.00	47.58	C
ATOM	603	CZ	PHE	A	38	38.233	-7.661	14.586	1.00	42.81	C
ATOM	605	CE2	PHE	A	38	37.394	-6.785	13.954	1.00	49.46	C
ATOM	607	CD2	PHE	A	38	37.717	-6.290	12.670	1.00	44.85	C
ATOM	609	C	PHE	A	38	40.227	-3.888	11.416	1.00	40.18	C
ATOM	610	O	PHE	A	38	41.406	-3.760	11.017	1.00	39.66	O
ATOM	611	N	ALA	A	39	39.802	-3.389	12.576	1.00	40.32	N
ATOM	613	CA	ALA	A	39	40.656	-2.515	13.403	1.00	40.28	C
ATOM	615	CB	ALA	A	39	40.810	-1.164	12.739	1.00	40.18	C
ATOM	619	C	ALA	A	39	40.020	-2.343	14.757	1.00	37.73	C
ATOM	620	O	ALA	A	39	38.787	-2.412	14.885	1.00	40.37	O
ATOM	621	N	VAL	A	40	40.839	-2.097	15.764	1.00	38.68	N
ATOM	623	CA	VAL	A	40	40.334	-2.088	17.117	1.00	39.39	C
ATOM	625	CB	VAL	A	40	40.369	-3.507	17.636	1.00	41.17	C
ATOM	627	CG1	VAL	A	40	39.731	-4.442	16.605	1.00	45.27	C
ATOM	631	CG2	VAL	A	40	41.722	-4.000	17.829	1.00	46.47	C
ATOM	635	C	VAL	A	40	41.080	-1.078	18.005	1.00	48.51	C
ATOM	636	O	VAL	A	40	42.175	-0.583	17.642	1.00	50.57	O
ATOM	637	N	GLY	A	41	40.477	-0.729	19.152	1.00	47.86	N
ATOM	639	CA	GLY	A	41	41.073	0.262	20.014	1.00	40.52	C
ATOM	642	C	GLY	A	41	42.290	-0.406	20.595	1.00	44.67	C
ATOM	643	O	GLY	A	41	42.140	-1.387	21.332	1.00	42.27	O
ATOM	644	N	ALA	A	42	43.500	0.079	20.274	1.00	46.72	N
ATOM	646	CA	ALA	A	42	44.724	-0.467	20.914	1.00	42.69	C
ATOM	648	CB	ALA	A	42	45.655	-0.928	19.886	1.00	42.07	C
ATOM	652	C	ALA	A	42	45.444	0.477	21.883	1.00	46.86	C

ATOM	653	O	ALA	A	42	46.687	0.515	21.984	1.00	45.43	O
ATOM	654	N	ALA	A	43	44.677	1.246	22.636	1.00	50.46	N
ATOM	656	CA	ALA	A	43	45.278	2.216	23.548	1.00	52.82	C
ATOM	658	CB	ALA	A	43	46.320	3.073	22.854	1.00	48.10	C
ATOM	662	C	ALA	A	43	44.196	3.101	24.052	1.00	56.62	C
ATOM	663	O	ALA	A	43	43.186	3.315	23.380	1.00	57.66	O
ATOM	664	N	PRO	A	44	44.446	3.628	25.238	1.00	62.73	N
ATOM	665	CA	PRO	A	44	43.510	4.492	25.962	1.00	59.53	C
ATOM	667	CB	PRO	A	44	44.390	5.093	27.053	1.00	62.72	C
ATOM	670	CG	PRO	A	44	45.835	4.754	26.603	1.00	66.12	C
ATOM	673	CD	PRO	A	44	45.696	3.411	26.003	1.00	65.12	C
ATOM	676	C	PRO	A	44	42.905	5.606	25.132	1.00	59.62	C
ATOM	677	O	PRO	A	44	43.553	6.133	24.218	1.00	55.79	O
ATOM	678	N	HIS	A	45	41.653	5.939	25.452	1.00	54.87	N
ATOM	680	CA	HIS	A	45	40.970	7.043	24.813	1.00	54.75	C
ATOM	682	CB	HIS	A	45	40.782	6.831	23.332	1.00	50.69	C
ATOM	685	CG	HIS	A	45	39.905	7.860	22.704	1.00	47.13	C
ATOM	686	ND1	HIS	A	45	38.634	8.126	23.167	1.00	46.73	N
ATOM	688	CE1	HIS	A	45	38.094	9.082	22.429	1.00	49.26	C
ATOM	690	NE2	HIS	A	45	38.965	9.443	21.501	1.00	40.27	N
ATOM	692	CD2	HIS	A	45	40.108	8.692	21.654	1.00	46.25	C
ATOM	694	C	HIS	A	45	39.645	7.185	25.525	1.00	61.01	C
ATOM	695	O	HIS	A	45	38.869	6.236	25.629	1.00	68.54	O
ATOM	696	N	PRO	A	46	39.368	8.398	25.976	1.00	66.55	N
ATOM	697	CA	PRO	A	46	38.316	8.630	26.973	1.00	67.17	C
ATOM	699	CB	PRO	A	46	37.953	10.103	26.772	1.00	67.46	C
ATOM	702	CG	PRO	A	46	39.078	10.729	25.902	1.00	64.56	C
ATOM	705	CD	PRO	A	46	39.993	9.648	25.496	1.00	65.48	C
ATOM	708	C	PRO	A	46	37.104	7.770	26.736	1.00	65.38	C
ATOM	709	O	PRO	A	46	36.433	7.311	27.650	1.00	68.92	O
ATOM	710	N	PHE	A	47	36.823	7.530	25.479	1.00	62.71	N
ATOM	712	CA	PHE	A	47	35.613	6.833	25.156	1.00	60.29	C
ATOM	714	CB	PHE	A	47	35.137	7.330	23.806	1.00	58.61	C
ATOM	717	CG	PHE	A	47	34.910	8.805	23.780	1.00	57.85	C
ATOM	718	CD1	PHE	A	47	34.809	9.490	22.583	1.00	54.09	C
ATOM	720	CE1	PHE	A	47	34.602	10.831	22.559	1.00	50.97	C
ATOM	722	CZ	PHE	A	47	34.486	11.529	23.739	1.00	57.26	C
ATOM	724	CE2	PHE	A	47	34.583	10.865	24.944	1.00	60.84	C
ATOM	726	CD2	PHE	A	47	34.792	9.507	24.965	1.00	59.30	C
ATOM	728	C	PHE	A	47	35.728	5.340	25.155	1.00	58.83	C
ATOM	729	O	PHE	A	47	34.806	4.684	24.721	1.00	61.67	O
ATOM	730	N	LEU	A	48	36.829	4.774	25.625	1.00	58.46	N
ATOM	732	CA	LEU	A	48	36.896	3.322	25.635	1.00	61.24	C
ATOM	734	CB	LEU	A	48	38.084	2.812	24.786	1.00	59.23	C
ATOM	737	CG	LEU	A	48	38.037	3.121	23.271	1.00	60.91	C
ATOM	739	CD1	LEU	A	48	39.439	3.297	22.652	1.00	56.82	C
ATOM	743	CD2	LEU	A	48	37.235	2.074	22.456	1.00	61.09	C
ATOM	747	C	LEU	A	48	36.928	2.709	27.037	1.00	62.47	C
ATOM	748	O	LEU	A	48	37.767	3.065	27.846	1.00	61.13	O
ATOM	749	N	HIS	A	49	35.984	1.803	27.305	1.00	65.56	N
ATOM	751	CA	HIS	A	49	36.036	0.929	28.489	1.00	66.38	C
ATOM	753	CB	HIS	A	49	34.791	0.037	28.642	1.00	73.64	C
ATOM	756	CG	HIS	A	49	33.560	0.785	29.012	1.00	78.39	C
ATOM	757	ND1	HIS	A	49	33.631	2.037	29.570	1.00	87.79	N
ATOM	759	CE1	HIS	A	49	32.415	2.503	29.791	1.00	85.97	C
ATOM	761	NE2	HIS	A	49	31.550	1.587	29.399	1.00	84.81	N
ATOM	763	CD2	HIS	A	49	32.241	0.494	28.908	1.00	79.17	C

ATOM	765	C	HIS	A	49	37.173	-0.070	28.366	1.00	60.95	C
ATOM	766	O	HIS	A	49	37.563	-0.684	29.362	1.00	60.23	O
ATOM	767	N	ARG	A	50	37.669	-0.304	27.149	1.00	58.11	N
ATOM	769	CA	ARG	A	50	38.768	-1.253	26.923	1.00	55.40	C
ATOM	771	CB	ARG	A	50	38.247	-2.671	26.985	1.00	55.21	C
ATOM	774	CG	ARG	A	50	36.757	-2.807	26.821	1.00	54.36	C
ATOM	777	CD	ARG	A	50	36.239	-4.211	27.167	1.00	48.77	C
ATOM	780	NE	ARG	A	50	35.083	-4.540	26.350	1.00	52.02	N
ATOM	782	CZ	ARG	A	50	34.594	-5.760	26.210	1.00	49.86	C
ATOM	783	NH1	ARG	A	50	35.170	-6.765	26.847	1.00	49.97	N
ATOM	786	NH2	ARG	A	50	33.529	-5.971	25.440	1.00	44.75	N
ATOM	789	C	ARG	A	50	39.577	-1.078	25.631	1.00	56.08	C
ATOM	790	O	ARG	A	50	39.388	-0.103	24.861	1.00	55.23	O
ATOM	791	N	TYR	A	51	40.506	-2.013	25.413	1.00	56.91	N
ATOM	793	CA	TYR	A	51	41.319	-2.010	24.195	1.00	57.53	C
ATOM	795	CB	TYR	A	51	42.153	-0.735	24.085	1.00	58.76	C
ATOM	798	CG	TYR	A	51	43.220	-0.483	25.148	1.00	65.10	C
ATOM	799	CD1	TYR	A	51	44.487	-1.041	25.057	1.00	70.53	C
ATOM	801	CE1	TYR	A	51	45.460	-0.792	26.036	1.00	68.47	C
ATOM	803	CZ	TYR	A	51	45.171	0.023	27.101	1.00	64.05	C
ATOM	804	OH	TYR	A	51	46.091	0.286	28.077	1.00	56.09	O
ATOM	806	CE2	TYR	A	51	43.947	0.573	27.198	1.00	65.65	C
ATOM	808	CD2	TYR	A	51	42.971	0.328	26.222	1.00	64.80	C
ATOM	810	C	TYR	A	51	42.211	-3.222	24.026	1.00	56.08	C
ATOM	811	O	TYR	A	51	42.650	-3.810	24.983	1.00	63.38	O
ATOM	812	N	TYR	A	52	42.456	-3.600	22.783	1.00	56.18	N
ATOM	814	CA	TYR	A	52	43.369	-4.698	22.440	1.00	54.65	C
ATOM	816	CB	TYR	A	52	43.609	-4.634	20.954	1.00	52.23	C
ATOM	819	CG	TYR	A	52	44.309	-5.802	20.342	1.00	49.44	C
ATOM	820	CD1	TYR	A	52	44.364	-7.038	20.958	1.00	49.18	C
ATOM	822	CE1	TYR	A	52	45.014	-8.084	20.352	1.00	44.95	C
ATOM	824	CZ	TYR	A	52	45.598	-7.880	19.123	1.00	40.40	C
ATOM	825	OH	TYR	A	52	46.257	-8.880	18.453	1.00	43.51	O
ATOM	827	CE2	TYR	A	52	45.543	-6.683	18.523	1.00	36.90	C
ATOM	829	CD2	TYR	A	52	44.906	-5.663	19.117	1.00	44.53	C
ATOM	831	C	TYR	A	52	44.716	-4.512	23.090	1.00	56.76	C
ATOM	832	O	TYR	A	52	45.267	-3.421	23.042	1.00	61.43	O
ATOM	833	N	GLN	A	53	45.269	-5.562	23.694	1.00	58.49	N
ATOM	835	CA	GLN	A	53	46.570	-5.444	24.371	1.00	50.39	C
ATOM	837	CB	GLN	A	53	46.443	-5.654	25.885	1.00	52.39	C
ATOM	840	CG	GLN	A	53	45.728	-4.466	26.574	1.00	57.22	C
ATOM	843	CD	GLN	A	53	45.807	-4.475	28.089	1.00	59.21	C
ATOM	844	OE1	GLN	A	53	44.778	-4.523	28.763	1.00	68.21	O
ATOM	845	NE2	GLN	A	53	47.019	-4.413	28.627	1.00	60.90	N
ATOM	848	C	GLN	A	53	47.498	-6.427	23.723	1.00	48.79	C
ATOM	849	O	GLN	A	53	47.660	-7.571	24.144	1.00	48.67	O
ATOM	850	N	ARG	A	54	48.115	-5.964	22.659	1.00	44.44	N
ATOM	852	CA	ARG	A	54	48.994	-6.809	21.908	1.00	42.47	C
ATOM	854	CB	ARG	A	54	49.669	-5.949	20.864	1.00	42.10	C
ATOM	857	CG	ARG	A	54	48.733	-5.430	19.740	1.00	35.73	C
ATOM	860	CD	ARG	A	54	49.465	-4.449	18.787	1.00	38.01	C
ATOM	863	NE	ARG	A	54	49.506	-3.127	19.393	1.00	46.13	N
ATOM	865	CZ	ARG	A	54	50.064	-2.072	18.861	1.00	54.49	C
ATOM	866	NH1	ARG	A	54	50.646	-2.176	17.682	1.00	63.14	N
ATOM	869	NH2	ARG	A	54	50.052	-0.903	19.504	1.00	58.58	N
ATOM	872	C	ARG	A	54	50.023	-7.562	22.802	1.00	46.11	C
ATOM	873	O	ARG	A	54	50.297	-8.750	22.623	1.00	50.14	O

ATOM	874	N	GLN	A	55	50.583	-6.887	23.777	1.00	49.49	N
ATOM	876	CA	GLN	A	55	51.570	-7.530	24.638	1.00	54.83	C
ATOM	878	CB	GLN	A	55	52.120	-6.504	25.638	1.00	56.89	C
ATOM	881	CG	GLN	A	55	51.331	-5.158	25.639	1.00	63.64	C
ATOM	884	CD	GLN	A	55	50.389	-4.991	26.815	1.00	69.23	C
ATOM	885	OE1	GLN	A	55	49.575	-4.052	26.852	1.00	65.62	O
ATOM	886	NE2	GLN	A	55	50.502	-5.892	27.790	1.00	75.17	N
ATOM	889	C	GLN	A	55	51.054	-8.780	25.379	1.00	56.17	C
ATOM	890	O	GLN	A	55	51.849	-9.509	25.952	1.00	55.62	O
ATOM	891	N	LEU	A	56	49.750	-9.047	25.388	1.00	55.53	N
ATOM	893	CA	LEU	A	56	49.250	-10.216	26.133	1.00	56.08	C
ATOM	895	CB	LEU	A	56	48.009	-9.835	26.904	1.00	57.00	C
ATOM	898	CG	LEU	A	56	48.155	-8.608	27.785	1.00	61.56	C
ATOM	900	CD1	LEU	A	56	46.968	-8.502	28.711	1.00	62.62	C
ATOM	904	CD2	LEU	A	56	49.453	-8.699	28.580	1.00	63.10	C
ATOM	908	C	LEU	A	56	48.874	-11.462	25.352	1.00	56.64	C
ATOM	909	O	LEU	A	56	48.488	-12.472	25.953	1.00	56.22	O
ATOM	910	N	SER	A	57	48.965	-11.396	24.029	1.00	55.33	N
ATOM	912	CA	SER	A	57	48.533	-12.496	23.198	1.00	51.40	C
ATOM	914	CB	SER	A	57	47.674	-12.011	22.060	1.00	50.76	C
ATOM	917	OG	SER	A	57	47.423	-13.069	21.154	1.00	51.82	O
ATOM	919	C	SER	A	57	49.768	-13.087	22.633	1.00	54.74	C
ATOM	920	O	SER	A	57	50.673	-12.386	22.229	1.00	64.50	O
ATOM	921	N	SER	A	58	49.827	-14.384	22.582	1.00	51.36	N
ATOM	923	CA	SER	A	58	51.036	-14.980	22.152	1.00	52.68	C
ATOM	925	CB	SER	A	58	51.243	-16.234	22.948	1.00	55.44	C
ATOM	928	OG	SER	A	58	50.240	-17.142	22.588	1.00	51.95	O
ATOM	930	C	SER	A	58	50.913	-15.342	20.717	1.00	51.45	C
ATOM	931	O	SER	A	58	51.810	-15.932	20.154	1.00	58.22	O
ATOM	932	N	THR	A	59	49.790	-15.005	20.122	1.00	49.52	N
ATOM	934	CA	THR	A	59	49.551	-15.299	18.719	1.00	45.44	C
ATOM	936	CB	THR	A	59	48.187	-15.986	18.586	1.00	43.26	C
ATOM	938	OG1	THR	A	59	47.220	-15.363	19.446	1.00	40.46	O
ATOM	940	CG2	THR	A	59	48.237	-17.366	19.192	1.00	43.84	C
ATOM	944	C	THR	A	59	49.674	-13.990	17.894	1.00	48.17	C
ATOM	945	O	THR	A	59	49.471	-13.981	16.676	1.00	49.26	O
ATOM	946	N	TYR	A	60	50.023	-12.884	18.556	1.00	44.42	N
ATOM	948	CA	TYR	A	60	50.180	-11.625	17.852	1.00	45.38	C
ATOM	950	CB	TYR	A	60	50.484	-10.499	18.843	1.00	46.42	C
ATOM	953	CG	TYR	A	60	50.852	-9.182	18.198	1.00	46.69	C
ATOM	954	CD1	TYR	A	60	49.945	-8.500	17.379	1.00	47.22	C
ATOM	956	CE1	TYR	A	60	50.291	-7.282	16.787	1.00	47.17	C
ATOM	958	CZ	TYR	A	60	51.546	-6.741	17.003	1.00	44.65	C
ATOM	959	OH	TYR	A	60	51.894	-5.538	16.408	1.00	49.47	O
ATOM	961	CE2	TYR	A	60	52.448	-7.393	17.813	1.00	41.96	C
ATOM	963	CD2	TYR	A	60	52.101	-8.604	18.408	1.00	45.55	C
ATOM	965	C	TYR	A	60	51.325	-11.709	16.878	1.00	47.40	C
ATOM	966	O	TYR	A	60	52.262	-12.460	17.080	1.00	51.21	O
ATOM	967	N	ARG	A	61	51.249	-10.942	15.804	1.00	48.35	N
ATOM	969	CA	ARG	A	61	52.388	-10.781	14.920	1.00	41.23	C
ATOM	971	CB	ARG	A	61	52.392	-11.782	13.795	1.00	44.25	C
ATOM	974	CG	ARG	A	61	52.548	-13.205	14.213	1.00	45.20	C
ATOM	977	CD	ARG	A	61	52.775	-14.118	13.033	1.00	46.69	C
ATOM	980	NE	ARG	A	61	53.343	-15.391	13.450	1.00	51.89	N
ATOM	982	CZ	ARG	A	61	52.893	-16.545	13.066	1.00	51.83	C
ATOM	983	NH1	ARG	A	61	51.872	-16.575	12.248	1.00	59.34	N
ATOM	986	NH2	ARG	A	61	53.448	-17.668	13.485	1.00	50.67	N

ATOM	989	C	ARG	A	61	52.287	-9.433	14.302	1.00	41.40	C
ATOM	990	O	ARG	A	61	51.278	-9.127	13.687	1.00	38.10	O
ATOM	991	N	ASP	A	62	53.374	-8.681	14.477	1.00	45.24	N
ATOM	993	CA	ASP	A	62	53.654	-7.322	13.990	1.00	43.46	C
ATOM	995	CB	ASP	A	62	54.947	-6.899	14.658	1.00	46.00	C
ATOM	998	CG	ASP	A	62	55.158	-5.405	14.673	1.00	50.50	C
ATOM	999	OD1	ASP	A	62	54.562	-4.701	13.833	1.00	47.18	O
ATOM	1000	OD2	ASP	A	62	55.940	-4.872	15.520	1.00	56.56	O
ATOM	1001	C	ASP	A	62	53.950	-7.230	12.530	1.00	38.57	C
ATOM	1002	O	ASP	A	62	54.868	-7.840	12.078	1.00	34.49	O
ATOM	1003	N	LEU	A	63	53.204	-6.429	11.784	1.00	42.04	N
ATOM	1005	CA	LEU	A	63	53.464	-6.332	10.355	1.00	41.63	C
ATOM	1007	CB	LEU	A	63	52.131	-6.216	9.586	1.00	39.89	C
ATOM	1010	CG	LEU	A	63	51.262	-7.490	9.430	1.00	39.13	C
ATOM	1012	CD1	LEU	A	63	49.768	-7.233	9.242	1.00	38.98	C
ATOM	1016	CD2	LEU	A	63	51.755	-8.283	8.272	1.00	35.93	C
ATOM	1020	C	LEU	A	63	54.414	-5.180	10.024	1.00	45.54	C
ATOM	1021	O	LEU	A	63	54.659	-4.921	8.853	1.00	45.94	O
ATOM	1022	N	ARG	A	64	54.933	-4.467	11.034	1.00	47.05	N
ATOM	1024	CA	ARG	A	64	55.873	-3.385	10.779	1.00	45.84	C
ATOM	1026	CB	ARG	A	64	57.261	-3.976	10.447	1.00	46.95	C
ATOM	1029	CG	ARG	A	64	57.974	-4.717	11.615	1.00	48.68	C
ATOM	1032	CD	ARG	A	64	58.685	-6.010	11.233	1.00	49.84	C
ATOM	1035	NE	ARG	A	64	59.846	-5.810	10.371	1.00	52.18	N
ATOM	1037	CZ	ARG	A	64	60.138	-6.547	9.301	1.00	58.00	C
ATOM	1038	NH1	ARG	A	64	59.360	-7.557	8.918	1.00	57.76	N
ATOM	1041	NH2	ARG	A	64	61.220	-6.268	8.594	1.00	59.82	N
ATOM	1044	C	ARG	A	64	55.451	-2.492	9.608	1.00	51.03	C
ATOM	1045	O	ARG	A	64	56.259	-2.219	8.721	1.00	53.48	O
ATOM	1046	N	LYS	A	65	54.198	-2.035	9.584	1.00	53.47	N
ATOM	1048	CA	LYS	A	65	53.686	-1.175	8.489	1.00	51.33	C
ATOM	1050	CB	LYS	A	65	53.329	-2.050	7.229	1.00	48.60	C
ATOM	1053	CG	LYS	A	65	52.131	-1.667	6.219	1.00	48.91	C
ATOM	1056	CD	LYS	A	65	51.911	-2.702	4.881	1.00	50.16	C
ATOM	1059	CE	LYS	A	65	50.792	-4.019	4.900	1.00	44.00	C
ATOM	1062	NZ	LYS	A	65	51.193	-5.488	4.701	1.00	11.49	N
ATOM	1066	C	LYS	A	65	52.519	-0.436	9.136	1.00	50.12	C
ATOM	1067	O	LYS	A	65	51.705	-1.075	9.781	1.00	56.99	O
ATOM	1068	N	GLY	A	66	52.450	0.890	9.005	1.00	47.93	N
ATOM	1070	CA	GLY	A	66	51.359	1.678	9.588	1.00	45.56	C
ATOM	1073	C	GLY	A	66	50.196	1.971	8.628	1.00	42.47	C
ATOM	1074	O	GLY	A	66	50.277	1.787	7.418	1.00	40.89	O
ATOM	1075	N	VAL	A	67	49.095	2.470	9.152	1.00	39.98	N
ATOM	1077	CA	VAL	A	67	48.000	2.820	8.264	1.00	35.53	C
ATOM	1079	CB	VAL	A	67	47.307	1.531	7.793	1.00	35.43	C
ATOM	1081	CG1	VAL	A	67	46.878	0.663	8.984	1.00	36.95	C
ATOM	1085	CG2	VAL	A	67	46.129	1.806	6.999	1.00	33.52	C
ATOM	1089	C	VAL	A	67	47.021	3.841	8.882	1.00	40.42	C
ATOM	1090	O	VAL	A	67	46.885	3.969	10.118	1.00	40.64	O
ATOM	1091	N	TYR	A	68	46.352	4.546	7.971	1.00	45.72	N
ATOM	1093	CA	TYR	A	68	45.436	5.668	8.208	1.00	46.34	C
ATOM	1095	CB	TYR	A	68	46.052	6.874	7.536	1.00	51.19	C
ATOM	1098	CG	TYR	A	68	45.306	8.202	7.533	1.00	61.31	C
ATOM	1099	CD1	TYR	A	68	44.911	8.826	8.726	1.00	62.21	C
ATOM	1101	CE1	TYR	A	68	44.266	10.043	8.702	1.00	61.39	C
ATOM	1103	CZ	TYR	A	68	44.008	10.665	7.491	1.00	63.25	C
ATOM	1104	OH	TYR	A	68	43.361	11.886	7.472	1.00	66.32	O

ATOM	1106	CE2	TYR	A	68	44.390	10.080	6.298	1.00	58.19	C
ATOM	1108	CD2	TYR	A	68	45.039	8.864	6.321	1.00	61.27	C
ATOM	1110	C	TYR	A	68	44.152	5.440	7.505	1.00	41.55	C
ATOM	1111	O	TYR	A	68	44.130	5.185	6.335	1.00	42.23	O
ATOM	1112	N	VAL	A	69	43.045	5.557	8.195	1.00	45.73	N
ATOM	1114	CA	VAL	A	69	41.791	5.348	7.519	1.00	43.18	C
ATOM	1116	CB	VAL	A	69	41.256	3.958	7.920	1.00	46.99	C
ATOM	1118	CG1	VAL	A	69	39.856	3.712	7.399	1.00	46.87	C
ATOM	1122	CG2	VAL	A	69	42.216	2.897	7.399	1.00	39.84	C
ATOM	1126	C	VAL	A	69	40.831	6.478	7.832	1.00	37.88	C
ATOM	1127	O	VAL	A	69	40.436	6.622	8.962	1.00	45.27	O
ATOM	1128	N	PRO	A	70	40.497	7.286	6.823	1.00	34.02	N
ATOM	1129	CA	PRO	A	70	39.507	8.345	6.917	1.00	29.99	C
ATOM	1131	CB	PRO	A	70	40.071	9.345	5.934	1.00	26.73	C
ATOM	1134	CG	PRO	A	70	40.414	8.518	4.800	1.00	25.36	C
ATOM	1137	CD	PRO	A	70	41.047	7.267	5.456	1.00	34.53	C
ATOM	1140	C	PRO	A	70	38.118	7.941	6.383	1.00	35.42	C
ATOM	1141	O	PRO	A	70	37.992	7.309	5.318	1.00	35.66	O
ATOM	1142	N	TYR	A	71	37.067	8.315	7.102	1.00	43.55	N
ATOM	1144	CA	TYR	A	71	35.699	8.076	6.626	1.00	47.40	C
ATOM	1146	CB	TYR	A	71	34.943	7.305	7.684	1.00	48.07	C
ATOM	1149	CG	TYR	A	71	35.651	6.025	8.159	1.00	49.56	C
ATOM	1150	CD1	TYR	A	71	35.181	4.750	7.818	1.00	49.21	C
ATOM	1152	CE1	TYR	A	71	35.822	3.609	8.258	1.00	46.98	C
ATOM	1154	CZ	TYR	A	71	36.924	3.741	9.045	1.00	44.80	C
ATOM	1155	OH	TYR	A	71	37.601	2.666	9.526	1.00	46.04	O
ATOM	1157	CE2	TYR	A	71	37.387	4.972	9.389	1.00	50.64	C
ATOM	1159	CD2	TYR	A	71	36.756	6.097	8.949	1.00	50.58	C
ATOM	1161	C	TYR	A	71	34.974	9.409	6.253	1.00	51.01	C
ATOM	1162	O	TYR	A	71	35.607	10.448	6.041	1.00	56.69	O
ATOM	1163	N	THR	A	72	33.653	9.373	6.144	1.00	54.06	N
ATOM	1165	CA	THR	A	72	32.842	10.586	5.982	1.00	48.48	C
ATOM	1167	CB	THR	A	72	31.462	10.140	5.541	1.00	42.95	C
ATOM	1169	OG1	THR	A	72	31.614	9.334	4.387	1.00	44.35	O
ATOM	1171	CG2	THR	A	72	30.620	11.232	4.935	1.00	46.38	C
ATOM	1175	C	THR	A	72	32.834	11.426	7.291	1.00	50.73	C
ATOM	1176	O	THR	A	72	32.793	12.633	7.256	1.00	49.87	O
ATOM	1177	N	GLN	A	73	32.873	10.790	8.446	1.00	57.02	N
ATOM	1179	CA	GLN	A	73	33.020	11.507	9.717	1.00	61.36	C
ATOM	1181	CB	GLN	A	73	31.704	11.705	10.489	1.00	61.87	C
ATOM	1184	CG	GLN	A	73	30.932	13.008	10.237	1.00	69.07	C
ATOM	1187	CD	GLN	A	73	31.616	14.250	10.830	1.00	73.52	C
ATOM	1188	OE1	GLN	A	73	31.469	14.561	12.028	1.00	73.43	O
ATOM	1189	NE2	GLN	A	73	32.369	14.960	9.987	1.00	74.63	N
ATOM	1192	C	GLN	A	73	33.930	10.654	10.576	1.00	61.53	C
ATOM	1193	O	GLN	A	73	33.592	9.520	10.910	1.00	63.25	O
ATOM	1194	N	GLY	A	74	35.079	11.208	10.935	1.00	62.04	N
ATOM	1196	CA	GLY	A	74	36.019	10.538	11.816	1.00	60.66	C
ATOM	1199	C	GLY	A	74	37.207	9.927	11.093	1.00	54.01	C
ATOM	1200	O	GLY	A	74	37.126	9.641	9.901	1.00	47.51	O
ATOM	1201	N	LYS	A	75	38.310	9.754	11.822	1.00	51.55	N
ATOM	1203	CA	LYS	A	75	39.445	8.982	11.330	1.00	48.56	C
ATOM	1205	CB	LYS	A	75	40.395	9.783	10.472	1.00	49.33	C
ATOM	1208	CG	LYS	A	75	40.953	11.042	11.076	1.00	50.33	C
ATOM	1211	CD	LYS	A	75	41.467	11.932	9.917	1.00	49.25	C
ATOM	1214	CE	LYS	A	75	41.609	13.425	10.286	1.00	50.50	C
ATOM	1217	NZ	LYS	A	75	43.031	13.815	10.654	1.00	42.60	N

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ATOM   1221  C   LYS A  75      40.203   8.425  12.455  1.00 45.88           C
ATOM   1222  O   LYS A  75      39.958   8.795  13.599  1.00 46.47           O
ATOM   1223  N   TRP A  76      41.105   7.501  12.110  1.00 46.31           N
ATOM   1225  CA  TRP A  76      42.052   6.881  13.058  1.00 47.24           C
ATOM   1227  CB  TRP A  76      41.502   5.620  13.777  1.00 41.96           C
ATOM   1230  CG  TRP A  76      40.864   4.653  12.875  1.00 40.56           C
ATOM   1231  CD1 TRP A  76      39.552   4.578  12.592  1.00 42.47           C
ATOM   1233  NE1 TRP A  76      39.304   3.557  11.706  1.00 44.26           N
ATOM   1235  CE2 TRP A  76      40.488   2.949  11.407  1.00 40.38           C
ATOM   1236  CD2 TRP A  76      41.494   3.615  12.132  1.00 39.72           C
ATOM   1237  CE3 TRP A  76      42.814   3.176  11.996  1.00 43.23           C
ATOM   1239  CZ3 TRP A  76      43.082   2.116  11.157  1.00 34.09           C
ATOM   1241  CH2 TRP A  76      42.047   1.481  10.452  1.00 40.84           C
ATOM   1243  CZ2 TRP A  76      40.749   1.887  10.567  1.00 37.49           C
ATOM   1245  C   TRP A  76      43.352   6.572  12.283  1.00 46.65           C
ATOM   1246  O   TRP A  76      43.376   6.593  11.058  1.00 44.54           O
ATOM   1247  N   GLU A  77      44.417   6.302  13.025  1.00 44.45           N
ATOM   1249  CA  GLU A  77      45.726   6.056  12.465  1.00 49.78           C
ATOM   1251  CB  GLU A  77      46.637   7.292  12.696  1.00 54.17           C
ATOM   1254  CG  GLU A  77      45.798   8.559  12.966  1.00 63.47           C
ATOM   1257  CD  GLU A  77      46.260   9.861  12.296  1.00 65.72           C
ATOM   1258  OE1 GLU A  77      47.499  10.099  12.217  1.00 62.94           O
ATOM   1259  OE2 GLU A  77      45.341  10.642  11.855  1.00 57.77           O
ATOM   1260  C   GLU A  77      46.145   4.851  13.268  1.00 48.59           C
ATOM   1261  O   GLU A  77      45.835   4.787  14.477  1.00 46.46           O
ATOM   1262  N   GLY A  78      46.814   3.881  12.643  1.00 44.59           N
ATOM   1264  CA  GLY A  78      47.148   2.670  13.387  1.00 43.33           C
ATOM   1267  C   GLY A  78      48.378   1.905  12.935  1.00 45.34           C
ATOM   1268  O   GLY A  78      49.054   2.322  11.945  1.00 46.85           O
ATOM   1269  N   GLU A  79      48.635   0.805  13.657  1.00 40.38           N
ATOM   1271  CA  GLU A  79      49.702  -0.144  13.391  1.00 45.02           C
ATOM   1273  CB  GLU A  79      50.631  -0.248  14.675  1.00 51.34           C
ATOM   1276  CG  GLU A  79      51.478   1.000  15.101  1.00 55.46           C
ATOM   1279  CD  GLU A  79      52.047   0.912  16.565  1.00 65.73           C
ATOM   1280  OE1 GLU A  79      52.921   1.815  17.021  1.00 64.66           O
ATOM   1281  OE2 GLU A  79      51.612  -0.082  17.271  1.00 54.33           O
ATOM   1282  C   GLU A  79      49.162  -1.565  12.952  1.00 44.43           C
ATOM   1283  O   GLU A  79      48.318  -2.183  13.626  1.00 39.67           O
ATOM   1284  N   LEU A  80      49.666  -2.080  11.829  1.00 45.33           N
ATOM   1286  CA  LEU A  80      49.240  -3.386  11.250  1.00 42.70           C
ATOM   1288  CB  LEU A  80      49.454  -3.355   9.743  1.00 39.42           C
ATOM   1291  CG  LEU A  80      48.461  -2.502   9.024  1.00 38.72           C
ATOM   1293  CD1 LEU A  80      48.671  -2.614   7.556  1.00 41.48           C
ATOM   1297  CD2 LEU A  80      47.097  -2.967   9.427  1.00 43.39           C
ATOM   1301  C   LEU A  80      49.908  -4.689  11.737  1.00 42.16           C
ATOM   1302  O   LEU A  80      51.133  -4.789  11.947  1.00 39.15           O
ATOM   1303  N   GLY A  81      49.084  -5.715  11.852  1.00 38.15           N
ATOM   1305  CA  GLY A  81      49.519  -6.972  12.414  1.00 40.41           C
ATOM   1308  C   GLY A  81      48.517  -8.073  12.156  1.00 41.89           C
ATOM   1309  O   GLY A  81      47.680  -7.948  11.282  1.00 40.94           O
ATOM   1310  N   THR A  82      48.631  -9.167  12.898  1.00 45.69           N
ATOM   1312  CA  THR A  82      47.663 -10.265  12.824  1.00 41.72           C
ATOM   1314  CB  THR A  82      48.071 -11.342  11.837  1.00 41.41           C
ATOM   1316  OG1 THR A  82      49.268 -12.009  12.302  1.00 40.17           O
ATOM   1318  CG2 THR A  82      48.423 -10.774  10.506  1.00 39.10           C
ATOM   1322  C   THR A  82      47.570 -10.947  14.176  1.00 42.06           C
ATOM   1323  O   THR A  82      48.416 -10.779  15.077  1.00 41.59           O
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ATOM	1324	N	ASP	A	83	46.532	-11.736	14.315	1.00	39.43	N
ATOM	1326	CA	ASP	A	83	46.344	-12.449	15.538	1.00	41.41	C
ATOM	1328	CB	ASP	A	83	46.090	-11.482	16.675	1.00	40.00	C
ATOM	1331	CG	ASP	A	83	46.263	-12.135	18.011	1.00	44.18	C
ATOM	1332	OD1	ASP	A	83	46.475	-13.344	18.014	1.00	45.61	O
ATOM	1333	OD2	ASP	A	83	46.225	-11.551	19.111	1.00	52.07	O
ATOM	1334	C	ASP	A	83	45.163	-13.314	15.246	1.00	44.90	C
ATOM	1335	O	ASP	A	83	44.544	-13.136	14.216	1.00	51.63	O
ATOM	1336	N	LEU	A	84	44.847	-14.260	16.110	1.00	45.58	N
ATOM	1338	CA	LEU	A	84	43.699	-15.139	15.877	1.00	44.62	C
ATOM	1340	CB	LEU	A	84	43.951	-16.446	16.629	1.00	41.76	C
ATOM	1343	CG	LEU	A	84	45.078	-17.361	16.133	1.00	41.81	C
ATOM	1345	CD1	LEU	A	84	45.177	-18.491	17.103	1.00	46.46	C
ATOM	1349	CD2	LEU	A	84	44.847	-17.978	14.767	1.00	42.92	C
ATOM	1353	C	LEU	A	84	42.374	-14.468	16.315	1.00	41.20	C
ATOM	1354	O	LEU	A	84	42.388	-13.643	17.191	1.00	52.36	O
ATOM	1355	N	VAL	A	85	41.234	-14.803	15.719	1.00	41.48	N
ATOM	1357	CA	VAL	A	85	39.973	-14.143	16.080	1.00	37.87	C
ATOM	1359	CB	VAL	A	85	39.743	-12.994	15.120	1.00	41.53	C
ATOM	1361	CG1	VAL	A	85	38.437	-12.345	15.380	1.00	47.66	C
ATOM	1365	CG2	VAL	A	85	40.822	-11.985	15.229	1.00	41.79	C
ATOM	1369	C	VAL	A	85	38.680	-14.998	16.052	1.00	39.48	C
ATOM	1370	O	VAL	A	85	38.448	-15.737	15.125	1.00	44.43	O
ATOM	1371	N	SER	A	86	37.833	-14.882	17.068	1.00	40.31	N
ATOM	1373	CA	SER	A	86	36.564	-15.608	17.085	1.00	44.63	C
ATOM	1375	CB	SER	A	86	36.474	-16.510	18.316	1.00	41.82	C
ATOM	1378	OG	SER	A	86	37.738	-17.097	18.545	1.00	55.30	O
ATOM	1380	C	SER	A	86	35.365	-14.678	17.157	1.00	45.48	C
ATOM	1381	O	SER	A	86	35.525	-13.486	17.463	1.00	41.16	O
ATOM	1382	N	ILE	A	87	34.185	-15.266	16.888	1.00	43.04	N
ATOM	1384	CA	ILE	A	87	32.885	-14.643	17.083	1.00	41.10	C
ATOM	1386	CB	ILE	A	87	32.215	-14.421	15.706	1.00	42.65	C
ATOM	1388	CG1	ILE	A	87	33.234	-13.839	14.754	1.00	43.78	C
ATOM	1391	CD1	ILE	A	87	32.624	-13.331	13.496	1.00	47.44	C
ATOM	1395	CG2	ILE	A	87	31.050	-13.435	15.795	1.00	39.53	C
ATOM	1399	C	ILE	A	87	32.022	-15.517	18.062	1.00	43.32	C
ATOM	1400	O	ILE	A	87	31.287	-16.462	17.663	1.00	44.61	O
ATOM	1401	N	PRO	A	88	32.120	-15.212	19.346	1.00	41.82	N
ATOM	1402	CA	PRO	A	88	31.440	-16.004	20.380	1.00	45.42	C
ATOM	1404	CB	PRO	A	88	31.311	-15.040	21.563	1.00	46.34	C
ATOM	1407	CG	PRO	A	88	32.594	-14.147	21.446	1.00	46.41	C
ATOM	1410	CD	PRO	A	88	32.902	-14.107	19.925	1.00	46.82	C
ATOM	1413	C	PRO	A	88	30.103	-16.508	19.949	1.00	44.85	C
ATOM	1414	O	PRO	A	88	29.867	-17.685	20.208	1.00	53.97	O
ATOM	1415	N	HIS	A	89	29.243	-15.692	19.354	1.00	46.76	N
ATOM	1417	CA	HIS	A	89	27.981	-16.214	18.801	1.00	50.05	C
ATOM	1419	CB	HIS	A	89	26.757	-15.526	19.316	1.00	48.45	C
ATOM	1422	CG	HIS	A	89	26.753	-15.317	20.780	1.00	55.56	C
ATOM	1423	ND1	HIS	A	89	26.375	-16.302	21.664	1.00	60.41	N
ATOM	1425	CE1	HIS	A	89	26.460	-15.830	22.899	1.00	64.25	C
ATOM	1427	NE2	HIS	A	89	26.878	-14.576	22.842	1.00	59.22	N
ATOM	1429	CD2	HIS	A	89	27.065	-14.229	21.524	1.00	56.69	C
ATOM	1431	C	HIS	A	89	27.958	-15.966	17.339	1.00	54.03	C
ATOM	1432	O	HIS	A	89	27.124	-15.179	16.853	1.00	55.54	O
ATOM	1433	N	GLY	A	90	28.896	-16.606	16.653	1.00	55.69	N
ATOM	1435	CA	GLY	A	90	28.986	-16.585	15.201	1.00	55.66	C
ATOM	1438	C	GLY	A	90	29.407	-18.001	14.865	1.00	52.28	C

ATOM	1439	O	GLY	A	90	29.482	-18.847	15.746	1.00	62.08	O
ATOM	1440	N	PRO	A	91	29.704	-18.297	13.628	1.00	47.23	N
ATOM	1441	CA	PRO	A	91	30.069	-19.664	13.308	1.00	47.93	C
ATOM	1443	CB	PRO	A	91	30.399	-19.586	11.830	1.00	49.04	C
ATOM	1446	CG	PRO	A	91	30.611	-18.114	11.561	1.00	45.67	C
ATOM	1449	CD	PRO	A	91	29.727	-17.419	12.456	1.00	48.30	C
ATOM	1452	C	PRO	A	91	31.248	-19.980	14.206	1.00	54.34	C
ATOM	1453	O	PRO	A	91	32.052	-19.090	14.448	1.00	56.82	O
ATOM	1454	N	GLN	A	92	31.343	-21.211	14.691	1.00	54.83	N
ATOM	1456	CA	GLN	A	92	32.261	-21.569	15.765	1.00	55.86	C
ATOM	1458	CB	GLN	A	92	31.662	-22.754	16.503	1.00	60.18	C
ATOM	1461	CG	GLN	A	92	30.322	-22.429	17.101	1.00	58.46	C
ATOM	1464	CD	GLN	A	92	30.470	-21.890	18.493	1.00	64.81	C
ATOM	1465	OE1	GLN	A	92	30.847	-22.631	19.418	1.00	63.91	O
ATOM	1466	NE2	GLN	A	92	30.178	-20.591	18.662	1.00	67.59	N
ATOM	1469	C	GLN	A	92	33.635	-21.950	15.325	1.00	56.89	C
ATOM	1470	O	GLN	A	92	34.036	-23.111	15.411	1.00	62.48	O
ATOM	1471	N	VAL	A	93	34.387	-20.961	14.897	1.00	55.14	N
ATOM	1473	CA	VAL	A	93	35.629	-21.223	14.237	1.00	50.07	C
ATOM	1475	CB	VAL	A	93	35.426	-21.112	12.760	1.00	51.39	C
ATOM	1477	CG1	VAL	A	93	34.450	-22.169	12.285	1.00	53.66	C
ATOM	1481	CG2	VAL	A	93	34.902	-19.715	12.424	1.00	53.54	C
ATOM	1485	C	VAL	A	93	36.605	-20.174	14.620	1.00	54.79	C
ATOM	1486	O	VAL	A	93	36.303	-19.243	15.382	1.00	56.10	O
ATOM	1487	N	THR	A	94	37.805	-20.303	14.089	1.00	53.29	N
ATOM	1489	CA	THR	A	94	38.802	-19.378	14.467	1.00	52.14	C
ATOM	1491	CB	THR	A	94	39.464	-19.960	15.690	1.00	53.16	C
ATOM	1493	OG1	THR	A	94	38.506	-19.888	16.761	1.00	53.79	O
ATOM	1495	CG2	THR	A	94	40.645	-19.093	16.197	1.00	56.24	C
ATOM	1499	C	THR	A	94	39.688	-19.131	13.285	1.00	52.21	C
ATOM	1500	O	THR	A	94	40.148	-20.051	12.624	1.00	61.76	O
ATOM	1501	N	VAL	A	95	39.923	-17.867	12.993	1.00	51.10	N
ATOM	1503	CA	VAL	A	95	40.645	-17.543	11.772	1.00	48.01	C
ATOM	1505	CB	VAL	A	95	39.722	-16.862	10.706	1.00	43.19	C
ATOM	1507	CG1	VAL	A	95	38.322	-17.270	10.858	1.00	37.56	C
ATOM	1511	CG2	VAL	A	95	39.760	-15.377	10.824	1.00	47.32	C
ATOM	1515	C	VAL	A	95	41.736	-16.577	12.111	1.00	45.91	C
ATOM	1516	O	VAL	A	95	41.608	-15.811	13.065	1.00	50.89	O
ATOM	1517	N	ARG	A	96	42.814	-16.615	11.353	1.00	41.67	N
ATOM	1519	CA	ARG	A	96	43.788	-15.565	11.502	1.00	43.07	C
ATOM	1521	CB	ARG	A	96	45.180	-16.043	11.235	1.00	41.47	C
ATOM	1524	CG	ARG	A	96	46.175	-14.982	11.546	1.00	41.13	C
ATOM	1527	CD	ARG	A	96	47.579	-15.400	11.409	1.00	43.93	C
ATOM	1530	NE	ARG	A	96	48.156	-15.492	12.744	1.00	52.62	N
ATOM	1532	CZ	ARG	A	96	48.450	-16.621	13.334	1.00	56.20	C
ATOM	1533	NH1	ARG	A	96	48.233	-17.778	12.696	1.00	59.54	N
ATOM	1536	NH2	ARG	A	96	48.965	-16.594	14.565	1.00	58.71	N
ATOM	1539	C	ARG	A	96	43.441	-14.460	10.512	1.00	40.12	C
ATOM	1540	O	ARG	A	96	43.081	-14.756	9.368	1.00	46.93	O
ATOM	1541	N	ALA	A	97	43.539	-13.208	10.963	1.00	37.94	N
ATOM	1543	CA	ALA	A	97	43.294	-12.033	10.119	1.00	40.48	C
ATOM	1545	CB	ALA	A	97	41.818	-11.575	10.255	1.00	40.89	C
ATOM	1549	C	ALA	A	97	44.193	-10.823	10.362	1.00	38.63	C
ATOM	1550	O	ALA	A	97	44.823	-10.673	11.393	1.00	40.23	O
ATOM	1551	N	ASN	A	98	44.208	-9.957	9.358	1.00	41.67	N
ATOM	1553	CA	ASN	A	98	44.823	-8.658	9.427	1.00	39.41	C
ATOM	1555	CB	ASN	A	98	44.680	-7.992	8.094	1.00	42.95	C

ATOM	1558	CG	ASN	A	98	45.476	-8.649	7.070	1.00	37.46	C
ATOM	1559	OD1	ASN	A	98	46.593	-8.980	7.320	1.00	37.53	O
ATOM	1560	ND2	ASN	A	98	44.915	-8.841	5.896	1.00	52.61	N
ATOM	1563	C	ASN	A	98	44.083	-7.799	10.369	1.00	40.10	C
ATOM	1564	O	ASN	A	98	42.863	-7.864	10.434	1.00	41.02	O
ATOM	1565	N	ILE	A	99	44.808	-6.962	11.089	1.00	44.12	N
ATOM	1567	CA	ILE	A	99	44.198	-6.153	12.128	1.00	44.32	C
ATOM	1569	CB	ILE	A	99	44.298	-6.840	13.502	1.00	41.75	C
ATOM	1571	CG1	ILE	A	99	43.507	-8.127	13.511	1.00	43.97	C
ATOM	1574	CD1	ILE	A	99	43.588	-8.918	14.872	1.00	48.22	C
ATOM	1578	CG2	ILE	A	99	43.722	-5.928	14.602	1.00	45.32	C
ATOM	1582	C	ILE	A	99	44.932	-4.844	12.154	1.00	44.51	C
ATOM	1583	O	ILE	A	99	46.082	-4.777	11.783	1.00	47.40	O
ATOM	1584	N	ALA	A	100	44.252	-3.795	12.579	1.00	45.36	N
ATOM	1586	CA	ALA	A	100	44.880	-2.510	12.655	1.00	41.65	C
ATOM	1588	CB	ALA	A	100	44.230	-1.553	11.762	1.00	41.33	C
ATOM	1592	C	ALA	A	100	44.732	-2.068	14.054	1.00	42.41	C
ATOM	1593	O	ALA	A	100	43.612	-1.861	14.531	1.00	41.57	O
ATOM	1594	N	ALA	A	101	45.865	-1.951	14.736	1.00	40.77	N
ATOM	1596	CA	ALA	A	101	45.801	-1.461	16.066	1.00	37.99	C
ATOM	1598	CB	ALA	A	101	46.907	-1.896	16.841	1.00	44.45	C
ATOM	1602	C	ALA	A	101	45.819	0.007	15.881	1.00	41.73	C
ATOM	1603	O	ALA	A	101	46.801	0.611	15.432	1.00	40.15	O
ATOM	1604	N	ILE	A	102	44.656	0.544	16.204	1.00	42.71	N
ATOM	1606	CA	ILE	A	102	44.379	1.911	16.241	1.00	39.72	C
ATOM	1608	CB	ILE	A	102	43.010	2.009	16.549	1.00	44.46	C
ATOM	1610	CG1	ILE	A	102	42.182	1.767	15.321	1.00	43.48	C
ATOM	1613	CD1	ILE	A	102	40.768	1.961	15.644	1.00	40.40	C
ATOM	1617	CG2	ILE	A	102	42.732	3.406	17.111	1.00	48.29	C
ATOM	1621	C	ILE	A	102	45.024	2.449	17.452	1.00	44.91	C
ATOM	1622	O	ILE	A	102	44.777	1.856	18.522	1.00	42.30	O
ATOM	1623	N	THR	A	103	45.795	3.544	17.257	1.00	45.74	N
ATOM	1625	CA	THR	A	103	46.583	4.269	18.265	1.00	48.02	C
ATOM	1627	CB	THR	A	103	48.113	4.118	17.971	1.00	48.61	C
ATOM	1629	OG1	THR	A	103	48.365	4.329	16.578	1.00	53.38	O
ATOM	1631	CG2	THR	A	103	48.601	2.733	18.209	1.00	42.44	C
ATOM	1635	C	THR	A	103	46.295	5.790	18.383	1.00	48.94	C
ATOM	1636	O	THR	A	103	46.547	6.358	19.407	1.00	51.09	O
ATOM	1637	N	GLU	A	104	45.804	6.456	17.343	1.00	54.39	N
ATOM	1639	CA	GLU	A	104	45.357	7.855	17.474	1.00	56.21	C
ATOM	1641	CB	GLU	A	104	46.402	8.823	16.940	1.00	61.91	C
ATOM	1644	CG	GLU	A	104	47.736	8.206	16.593	1.00	66.58	C
ATOM	1647	CD	GLU	A	104	48.599	9.142	15.758	1.00	71.04	C
ATOM	1648	OE1	GLU	A	104	48.030	9.782	14.832	1.00	69.31	O
ATOM	1649	OE2	GLU	A	104	49.833	9.228	16.037	1.00	69.74	O
ATOM	1650	C	GLU	A	104	44.062	8.088	16.684	1.00	53.27	C
ATOM	1651	O	GLU	A	104	43.890	7.496	15.610	1.00	44.69	O
ATOM	1652	N	SER	A	105	43.182	8.968	17.179	1.00	52.49	N
ATOM	1654	CA	SER	A	105	41.858	9.143	16.562	1.00	54.80	C
ATOM	1656	CB	SER	A	105	40.954	8.049	17.093	1.00	53.62	C
ATOM	1659	OG	SER	A	105	41.288	7.850	18.448	1.00	51.12	O
ATOM	1661	C	SER	A	105	41.136	10.454	16.809	1.00	56.75	C
ATOM	1662	O	SER	A	105	41.285	11.077	17.858	1.00	57.71	O
ATOM	1663	N	ASP	A	106	40.301	10.829	15.841	1.00	57.97	N
ATOM	1665	CA	ASP	A	106	39.596	12.109	15.846	1.00	57.67	C
ATOM	1667	CB	ASP	A	106	40.343	13.113	14.941	1.00	60.33	C
ATOM	1670	CG	ASP	A	106	39.862	14.562	15.098	1.00	66.40	C

ATOM	1671	OD1	ASP	A	106	39.308	14.924	16.157	1.00 70.77	O
ATOM	1672	OD2	ASP	A	106	40.007	15.422	14.192	1.00 70.32	O
ATOM	1673	C	ASP	A	106	38.136	11.950	15.391	1.00 54.92	C
ATOM	1674	O	ASP	A	106	37.824	11.896	14.204	1.00 46.42	O
ATOM	1675	N	LYS	A	107	37.248	11.869	16.371	1.00 57.47	N
ATOM	1677	CA	LYS	A	107	35.810	11.879	16.136	1.00 55.68	C
ATOM	1679	CB	LYS	A	107	35.365	13.092	15.277	1.00 55.19	C
ATOM	1682	CG	LYS	A	107	35.774	14.500	15.817	1.00 54.89	C
ATOM	1685	CD	LYS	A	107	35.904	15.570	14.683	1.00 57.62	C
ATOM	1688	CE	LYS	A	107	36.209	16.997	15.235	1.00 62.59	C
ATOM	1691	NZ	LYS	A	107	35.127	18.067	15.030	1.00 61.25	N
ATOM	1695	C	LYS	A	107	35.489	10.578	15.466	1.00 54.50	C
ATOM	1696	O	LYS	A	107	34.661	10.520	14.550	1.00 60.65	O
ATOM	1697	N	PHE	A	108	36.158	9.526	15.917	1.00 48.69	N
ATOM	1699	CA	PHE	A	108	35.848	8.201	15.414	1.00 47.47	C
ATOM	1701	CB	PHE	A	108	37.114	7.485	14.985	1.00 46.41	C
ATOM	1704	CG	PHE	A	108	36.892	6.087	14.554	1.00 44.05	C
ATOM	1705	CD1	PHE	A	108	36.267	5.810	13.372	1.00 33.79	C
ATOM	1707	CE1	PHE	A	108	36.073	4.549	12.988	1.00 37.34	C
ATOM	1709	CZ	PHE	A	108	36.479	3.522	13.778	1.00 41.83	C
ATOM	1711	CE2	PHE	A	108	37.111	3.773	14.959	1.00 45.59	C
ATOM	1713	CD2	PHE	A	108	37.321	5.043	15.341	1.00 45.93	C
ATOM	1715	C	PHE	A	108	35.068	7.468	16.508	1.00 49.52	C
ATOM	1716	O	PHE	A	108	33.900	7.133	16.347	1.00 55.52	O
ATOM	1717	N	PHE	A	109	35.684	7.241	17.643	1.00 49.90	N
ATOM	1719	CA	PHE	A	109	34.961	6.631	18.732	1.00 51.23	C
ATOM	1721	CB	PHE	A	109	35.880	6.391	19.906	1.00 53.93	C
ATOM	1724	CG	PHE	A	109	36.954	5.422	19.634	1.00 57.15	C
ATOM	1725	CD1	PHE	A	109	38.276	5.816	19.684	1.00 59.98	C
ATOM	1727	CE1	PHE	A	109	39.280	4.917	19.436	1.00 63.80	C
ATOM	1729	CZ	PHE	A	109	38.970	3.604	19.137	1.00 66.86	C
ATOM	1731	CE2	PHE	A	109	37.643	3.200	19.088	1.00 66.40	C
ATOM	1733	CD2	PHE	A	109	36.647	4.114	19.336	1.00 61.41	C
ATOM	1735	C	PHE	A	109	33.892	7.583	19.198	1.00 52.57	C
ATOM	1736	O	PHE	A	109	34.087	8.778	19.130	1.00 50.58	O
ATOM	1737	N	ILE	A	110	32.780	7.025	19.703	1.00 57.48	N
ATOM	1739	CA	ILE	A	110	31.592	7.769	20.162	1.00 51.27	C
ATOM	1741	CB	ILE	A	110	30.420	7.363	19.310	1.00 49.34	C
ATOM	1743	CG1	ILE	A	110	30.506	8.107	17.992	1.00 54.03	C
ATOM	1746	CD1	ILE	A	110	29.249	8.085	17.198	1.00 53.87	C
ATOM	1750	CG2	ILE	A	110	29.129	7.681	19.985	1.00 54.77	C
ATOM	1754	C	ILE	A	110	31.281	7.492	21.627	1.00 49.04	C
ATOM	1755	O	ILE	A	110	31.108	6.355	22.046	1.00 47.53	O
ATOM	1756	N	GLN	A	111	31.195	8.544	22.415	1.00 53.16	N
ATOM	1758	CA	GLN	A	111	31.043	8.356	23.843	1.00 56.60	C
ATOM	1760	CB	GLN	A	111	30.953	9.694	24.548	1.00 58.84	C
ATOM	1763	CG	GLN	A	111	30.746	9.520	26.046	1.00 62.67	C
ATOM	1766	CD	GLN	A	111	31.078	10.773	26.833	1.00 66.32	C
ATOM	1767	OE1	GLN	A	111	30.451	11.816	26.635	1.00 68.85	O
ATOM	1768	NE2	GLN	A	111	32.068	10.677	27.724	1.00 70.23	N
ATOM	1771	C	GLN	A	111	29.816	7.552	24.202	1.00 57.17	C
ATOM	1772	O	GLN	A	111	28.701	7.829	23.730	1.00 64.12	O
ATOM	1773	N	GLY	A	112	30.012	6.560	25.043	1.00 54.22	N
ATOM	1775	CA	GLY	A	112	28.893	5.803	25.547	1.00 56.70	C
ATOM	1778	C	GLY	A	112	28.279	4.937	24.486	1.00 58.44	C
ATOM	1779	O	GLY	A	112	27.109	4.561	24.538	1.00 61.06	O
ATOM	1780	N	SER	A	113	29.083	4.599	23.501	1.00 61.23	N

ATOM	1782	CA	SER	A	113	28.603	3.762	22.424	1.00	58.94	C
ATOM	1784	CB	SER	A	113	29.408	4.080	21.174	1.00	60.39	C
ATOM	1787	OG	SER	A	113	30.773	4.180	21.514	1.00	59.53	O
ATOM	1789	C	SER	A	113	28.687	2.272	22.768	1.00	54.01	C
ATOM	1790	O	SER	A	113	27.891	1.528	22.279	1.00	53.79	O
ATOM	1791	N	ASN	A	114	29.642	1.879	23.613	1.00	48.58	N
ATOM	1793	CA	ASN	A	114	29.882	0.505	24.026	1.00	47.72	C
ATOM	1795	CB	ASN	A	114	28.660	-0.222	24.481	1.00	52.15	C
ATOM	1798	CG	ASN	A	114	29.015	-1.423	25.395	1.00	61.51	C
ATOM	1799	OD1	ASN	A	114	29.436	-1.259	26.544	1.00	64.39	O
ATOM	1800	ND2	ASN	A	114	28.867	-2.632	24.867	1.00	65.83	N
ATOM	1803	C	ASN	A	114	30.664	-0.364	23.028	1.00	50.29	C
ATOM	1804	O	ASN	A	114	30.981	-1.544	23.314	1.00	51.67	O
ATOM	1805	N	TRP	A	115	31.014	0.204	21.871	1.00	48.89	N
ATOM	1807	CA	TRP	A	115	31.822	-0.536	20.929	1.00	46.17	C
ATOM	1809	CB	TRP	A	115	31.244	-0.530	19.518	1.00	42.77	C
ATOM	1812	CG	TRP	A	115	30.907	0.748	18.828	1.00	39.20	C
ATOM	1813	CD1	TRP	A	115	29.722	1.338	18.787	1.00	35.62	C
ATOM	1815	NE1	TRP	A	115	29.782	2.481	18.028	1.00	36.54	N
ATOM	1817	CE2	TRP	A	115	31.055	2.631	17.575	1.00	33.32	C
ATOM	1818	CD2	TRP	A	115	31.783	1.553	18.053	1.00	36.65	C
ATOM	1819	CE3	TRP	A	115	33.132	1.462	17.723	1.00	37.81	C
ATOM	1821	CZ3	TRP	A	115	33.681	2.419	16.946	1.00	32.70	C
ATOM	1823	CH2	TRP	A	115	32.924	3.479	16.485	1.00	43.43	C
ATOM	1825	CZ2	TRP	A	115	31.607	3.604	16.791	1.00	40.37	C
ATOM	1827	C	TRP	A	115	33.277	-0.054	21.024	1.00	51.28	C
ATOM	1828	O	TRP	A	115	33.541	0.928	21.733	1.00	54.94	O
ATOM	1829	N	GLU	A	116	34.204	-0.729	20.356	1.00	48.07	N
ATOM	1831	CA	GLU	A	116	35.607	-0.389	20.499	1.00	52.18	C
ATOM	1833	CB	GLU	A	116	36.192	-1.236	21.600	1.00	54.65	C
ATOM	1836	CG	GLU	A	116	35.916	-0.715	22.996	1.00	57.18	C
ATOM	1839	CD	GLU	A	116	34.979	-1.591	23.806	1.00	59.55	C
ATOM	1840	OE1	GLU	A	116	34.289	-1.014	24.701	1.00	63.96	O
ATOM	1841	OE2	GLU	A	116	34.941	-2.830	23.558	1.00	53.25	O
ATOM	1842	C	GLU	A	116	36.444	-0.607	19.218	1.00	52.81	C
ATOM	1843	O	GLU	A	116	37.686	-0.501	19.227	1.00	46.45	O
ATOM	1844	N	GLY	A	117	35.754	-0.885	18.119	1.00	48.92	N
ATOM	1846	CA	GLY	A	117	36.435	-1.222	16.902	1.00	47.29	C
ATOM	1849	C	GLY	A	117	35.469	-1.364	15.750	1.00	47.08	C
ATOM	1850	O	GLY	A	117	34.257	-1.112	15.798	1.00	38.00	O
ATOM	1851	N	ILE	A	118	35.999	-1.781	14.641	1.00	43.80	N
ATOM	1853	CA	ILE	A	118	35.113	-1.752	13.533	1.00	39.64	C
ATOM	1855	CB	ILE	A	118	35.323	-0.489	12.871	1.00	33.14	C
ATOM	1857	CG1	ILE	A	118	34.441	-0.351	11.673	1.00	38.51	C
ATOM	1860	CD1	ILE	A	118	34.304	1.118	11.253	1.00	38.06	C
ATOM	1864	CG2	ILE	A	118	36.669	-0.442	12.386	1.00	41.01	C
ATOM	1868	C	ILE	A	118	35.465	-2.905	12.666	1.00	39.08	C
ATOM	1869	O	ILE	A	118	36.608	-3.210	12.482	1.00	41.16	O
ATOM	1870	N	LEU	A	119	34.445	-3.566	12.175	1.00	39.01	N
ATOM	1872	CA	LEU	A	119	34.628	-4.621	11.269	1.00	38.51	C
ATOM	1874	CB	LEU	A	119	33.759	-5.772	11.693	1.00	39.97	C
ATOM	1877	CG	LEU	A	119	33.969	-6.973	10.812	1.00	40.38	C
ATOM	1879	CD1	LEU	A	119	35.433	-7.445	10.870	1.00	37.17	C
ATOM	1883	CD2	LEU	A	119	33.036	-8.028	11.273	1.00	42.73	C
ATOM	1887	C	LEU	A	119	34.151	-4.097	9.953	1.00	38.40	C
ATOM	1888	O	LEU	A	119	32.965	-3.923	9.771	1.00	43.72	O
ATOM	1889	N	GLY	A	120	35.059	-3.794	9.039	1.00	40.26	N

ATOM	1891	CA	GLY	A	120	34.655	-3.388	7.696	1.00	37.27	C
ATOM	1894	C	GLY	A	120	34.278	-4.619	6.920	1.00	35.23	C
ATOM	1895	O	GLY	A	120	35.044	-5.538	6.888	1.00	41.95	O
ATOM	1896	N	LEU	A	121	33.116	-4.697	6.293	1.00	40.05	N
ATOM	1898	CA	LEU	A	121	32.866	-5.891	5.473	1.00	34.58	C
ATOM	1900	CB	LEU	A	121	31.626	-6.622	5.917	1.00	35.45	C
ATOM	1903	CG	LEU	A	121	31.436	-6.831	7.393	1.00	31.35	C
ATOM	1905	CD1	LEU	A	121	29.950	-6.863	7.687	1.00	28.15	C
ATOM	1909	CD2	LEU	A	121	32.124	-8.105	7.719	1.00	28.77	C
ATOM	1913	C	LEU	A	121	32.704	-5.635	3.984	1.00	37.29	C
ATOM	1914	O	LEU	A	121	32.158	-6.483	3.267	1.00	42.02	O
ATOM	1915	N	ALA	A	122	33.145	-4.505	3.469	1.00	36.05	N
ATOM	1917	CA	ALA	A	122	33.084	-4.404	2.029	1.00	39.37	C
ATOM	1919	CB	ALA	A	122	32.974	-3.039	1.593	1.00	40.38	C
ATOM	1923	C	ALA	A	122	34.289	-5.090	1.398	1.00	41.97	C
ATOM	1924	O	ALA	A	122	35.020	-5.841	2.046	1.00	40.99	O
ATOM	1925	N	TYR	A	123	34.486	-4.796	0.124	1.00	43.02	N
ATOM	1927	CA	TYR	A	123	35.423	-5.522	-0.690	1.00	40.35	C
ATOM	1929	CB	TYR	A	123	34.904	-5.453	-2.091	1.00	38.74	C
ATOM	1932	CG	TYR	A	123	33.687	-6.306	-2.361	1.00	41.64	C
ATOM	1933	CD1	TYR	A	123	32.453	-5.755	-2.557	1.00	39.22	C
ATOM	1935	CE1	TYR	A	123	31.352	-6.564	-2.824	1.00	34.66	C
ATOM	1937	CZ	TYR	A	123	31.487	-7.899	-2.896	1.00	36.31	C
ATOM	1938	OH	TYR	A	123	30.392	-8.724	-3.167	1.00	43.22	O
ATOM	1940	CE2	TYR	A	123	32.711	-8.459	-2.706	1.00	43.43	C
ATOM	1942	CD2	TYR	A	123	33.788	-7.686	-2.443	1.00	43.16	C
ATOM	1944	C	TYR	A	123	36.758	-4.856	-0.586	1.00	43.96	C
ATOM	1945	O	TYR	A	123	36.831	-3.746	-0.094	1.00	43.08	O
ATOM	1946	N	ALA	A	124	37.810	-5.509	-1.063	1.00	46.53	N
ATOM	1948	CA	ALA	A	124	39.194	-5.021	-0.894	1.00	45.27	C
ATOM	1950	CB	ALA	A	124	40.163	-6.124	-1.311	1.00	45.24	C
ATOM	1954	C	ALA	A	124	39.597	-3.728	-1.616	1.00	47.88	C
ATOM	1955	O	ALA	A	124	40.511	-2.999	-1.159	1.00	47.35	O
ATOM	1956	N	GLU	A	125	38.950	-3.438	-2.735	1.00	46.72	N
ATOM	1958	CA	GLU	A	125	39.399	-2.342	-3.574	1.00	46.92	C
ATOM	1960	CB	GLU	A	125	38.461	-2.169	-4.774	1.00	49.10	C
ATOM	1963	CG	GLU	A	125	38.608	-0.831	-5.492	1.00	55.04	C
ATOM	1966	CD	GLU	A	125	37.786	-0.739	-6.766	1.00	58.92	C
ATOM	1967	OE1	GLU	A	125	37.095	-1.730	-7.135	1.00	59.91	O
ATOM	1968	OE2	GLU	A	125	37.819	0.355	-7.409	1.00	68.22	O
ATOM	1969	C	GLU	A	125	39.511	-1.074	-2.753	1.00	49.28	C
ATOM	1970	O	GLU	A	125	40.486	-0.298	-2.858	1.00	51.06	O
ATOM	1971	N	ILE	A	126	38.521	-0.843	-1.908	1.00	46.11	N
ATOM	1973	CA	ILE	A	126	38.561	0.376	-1.157	1.00	43.32	C
ATOM	1975	CB	ILE	A	126	37.142	0.953	-0.961	1.00	47.04	C
ATOM	1977	CG1	ILE	A	126	36.254	0.022	-0.122	1.00	44.04	C
ATOM	1980	CD1	ILE	A	126	34.965	0.642	0.383	1.00	50.45	C
ATOM	1984	CG2	ILE	A	126	36.539	1.274	-2.351	1.00	46.90	C
ATOM	1988	C	ILE	A	126	39.288	0.228	0.142	1.00	44.66	C
ATOM	1989	O	ILE	A	126	39.146	1.085	1.007	1.00	48.22	O
ATOM	1990	N	ALA	A	127	40.093	-0.808	0.310	1.00	44.81	N
ATOM	1992	CA	ALA	A	127	40.788	-0.914	1.580	1.00	48.39	C
ATOM	1994	CB	ALA	A	127	40.982	-2.321	1.937	1.00	50.81	C
ATOM	1998	C	ALA	A	127	42.119	-0.200	1.613	1.00	52.76	C
ATOM	1999	O	ALA	A	127	42.699	0.145	0.574	1.00	59.40	O
ATOM	2000	N	ARG	A	128	42.591	0.010	2.838	1.00	51.36	N
ATOM	2002	CA	ARG	A	128	43.783	0.715	3.064	1.00	51.80	C

ATOM	2004	CB	ARG	A	128	43.430	1.900	3.897	1.00	56.05	C
ATOM	2007	CG	ARG	A	128	42.275	2.626	3.401	1.00	59.64	C
ATOM	2010	CD	ARG	A	128	42.295	2.934	1.917	1.00	69.11	C
ATOM	2013	NE	ARG	A	128	41.482	4.108	1.663	1.00	79.76	N
ATOM	2015	CZ	ARG	A	128	41.839	5.318	2.018	1.00	81.91	C
ATOM	2016	NH1	ARG	A	128	43.001	5.508	2.630	1.00	80.28	N
ATOM	2019	NH2	ARG	A	128	41.039	6.335	1.759	1.00	87.99	N
ATOM	2022	C	ARG	A	128	44.831	-0.135	3.828	1.00	51.97	C
ATOM	2023	O	ARG	A	128	44.461	-0.987	4.689	1.00	49.70	O
ATOM	2024	N	PRO	A	129	46.129	0.076	3.544	1.00	44.07	N
ATOM	2025	CA	PRO	A	129	46.636	1.004	2.539	1.00	39.23	C
ATOM	2027	CB	PRO	A	129	48.105	0.812	2.595	1.00	39.26	C
ATOM	2030	CG	PRO	A	129	48.386	-0.019	3.710	1.00	44.63	C
ATOM	2033	CD	PRO	A	129	47.196	-0.642	4.242	1.00	43.20	C
ATOM	2036	C	PRO	A	129	46.254	0.674	1.113	1.00	45.48	C
ATOM	2037	O	PRO	A	129	46.153	1.658	0.336	1.00	46.05	O
ATOM	2038	N	ASP	A	130	46.101	-0.637	0.783	1.00	46.52	N
ATOM	2040	CA	ASP	A	130	45.574	-1.009	-0.520	1.00	47.07	C
ATOM	2042	CB	ASP	A	130	46.563	-0.676	-1.653	1.00	52.49	C
ATOM	2045	CG	ASP	A	130	47.874	-1.365	-1.520	1.00	58.99	C
ATOM	2046	OD1	ASP	A	130	48.849	-0.917	-2.187	1.00	66.76	O
ATOM	2047	OD2	ASP	A	130	48.023	-2.366	-0.794	1.00	64.97	O
ATOM	2048	C	ASP	A	130	44.937	-2.355	-0.652	1.00	44.59	C
ATOM	2049	O	ASP	A	130	44.877	-3.167	0.272	1.00	50.22	O
ATOM	2050	N	ASP	A	131	44.443	-2.606	-1.834	1.00	41.96	N
ATOM	2052	CA	ASP	A	131	43.679	-3.802	-2.024	1.00	45.38	C
ATOM	2054	CB	ASP	A	131	43.076	-3.828	-3.427	1.00	45.37	C
ATOM	2057	CG	ASP	A	131	44.106	-4.043	-4.476	1.00	54.14	C
ATOM	2058	OD1	ASP	A	131	45.130	-4.692	-4.143	1.00	60.53	O
ATOM	2059	OD2	ASP	A	131	43.983	-3.593	-5.648	1.00	58.51	O
ATOM	2060	C	ASP	A	131	44.437	-5.085	-1.770	1.00	41.04	C
ATOM	2061	O	ASP	A	131	43.912	-6.123	-2.065	1.00	49.55	O
ATOM	2062	N	SER	A	132	45.645	-5.050	-1.247	1.00	39.75	N
ATOM	2064	CA	SER	A	132	46.409	-6.304	-1.002	1.00	45.06	C
ATOM	2066	CB	SER	A	132	47.788	-6.174	-1.605	1.00	43.25	C
ATOM	2069	OG	SER	A	132	48.375	-4.995	-1.060	1.00	53.72	O
ATOM	2071	C	SER	A	132	46.582	-6.591	0.489	1.00	41.26	C
ATOM	2072	O	SER	A	132	47.588	-7.115	0.938	1.00	52.36	O
ATOM	2073	N	LEU	A	133	45.584	-6.162	1.242	1.00	43.42	N
ATOM	2075	CA	LEU	A	133	45.558	-6.239	2.687	1.00	44.69	C
ATOM	2077	CB	LEU	A	133	45.773	-4.923	3.419	1.00	41.73	C
ATOM	2080	CG	LEU	A	133	45.518	-5.228	4.908	1.00	41.79	C
ATOM	2082	CD1	LEU	A	133	46.832	-5.498	5.559	1.00	39.80	C
ATOM	2086	CD2	LEU	A	133	44.771	-4.164	5.716	1.00	44.00	C
ATOM	2090	C	LEU	A	133	44.166	-6.677	2.929	1.00	47.10	C
ATOM	2091	O	LEU	A	133	43.330	-5.956	3.439	1.00	51.69	O
ATOM	2092	N	GLU	A	134	43.977	-7.906	2.510	1.00	51.73	N
ATOM	2094	CA	GLU	A	134	42.777	-8.725	2.630	1.00	48.06	C
ATOM	2096	CB	GLU	A	134	43.241	-10.178	2.777	1.00	47.21	C
ATOM	2099	CG	GLU	A	134	42.169	-11.212	3.013	1.00	52.87	C
ATOM	2102	CD	GLU	A	134	42.689	-12.623	2.755	1.00	56.68	C
ATOM	2103	OE1	GLU	A	134	42.980	-12.874	1.569	1.00	55.42	O
ATOM	2104	OE2	GLU	A	134	42.817	-13.448	3.709	1.00	55.93	O
ATOM	2105	C	GLU	A	134	41.837	-8.500	3.783	1.00	46.74	C
ATOM	2106	O	GLU	A	134	42.237	-8.575	4.940	1.00	43.54	O
ATOM	2107	N	PRO	A	135	40.576	-8.279	3.446	1.00	40.56	N
ATOM	2108	CA	PRO	A	135	39.531	-8.099	4.437	1.00	37.41	C

ATOM	2110	CB	PRO	A	135	38.355	-7.629	3.597	1.00 37.44	C
ATOM	2113	CG	PRO	A	135	38.853	-7.363	2.237	1.00 40.45	C
ATOM	2116	CD	PRO	A	135	40.071	-8.171	2.068	1.00 42.71	C
ATOM	2119	C	PRO	A	135	39.174	-9.353	5.269	1.00 36.44	C
ATOM	2120	O	PRO	A	135	39.366	-10.450	4.767	1.00 34.69	O
ATOM	2121	N	PHE	A	136	38.668	-9.163	6.505	1.00 35.67	N
ATOM	2123	CA	PHE	A	136	38.233	-10.241	7.427	1.00 31.72	C
ATOM	2125	CB	PHE	A	136	37.463	-9.676	8.625	1.00 27.91	C
ATOM	2128	CG	PHE	A	136	36.835	-10.727	9.517	1.00 28.87	C
ATOM	2129	CD1	PHE	A	136	37.537	-11.301	10.550	1.00 32.96	C
ATOM	2131	CE1	PHE	A	136	36.966	-12.267	11.382	1.00 33.11	C
ATOM	2133	CZ	PHE	A	136	35.694	-12.663	11.195	1.00 33.91	C
ATOM	2135	CE2	PHE	A	136	34.968	-12.111	10.175	1.00 36.07	C
ATOM	2137	CD2	PHE	A	136	35.544	-11.137	9.333	1.00 37.92	C
ATOM	2139	C	PHE	A	136	37.332	-11.218	6.753	1.00 35.77	C
ATOM	2140	O	PHE	A	136	37.649	-12.376	6.668	1.00 45.44	O
ATOM	2141	N	PHE	A	137	36.194	-10.778	6.261	1.00 40.56	N
ATOM	2143	CA	PHE	A	137	35.282	-11.754	5.677	1.00 43.42	C
ATOM	2145	CB	PHE	A	137	34.008	-11.132	5.014	1.00 43.68	C
ATOM	2148	CG	PHE	A	137	32.841	-12.067	5.028	1.00 41.41	C
ATOM	2149	CD1	PHE	A	137	32.094	-12.231	6.160	1.00 38.90	C
ATOM	2151	CE1	PHE	A	137	31.051	-13.107	6.179	1.00 36.47	C
ATOM	2153	CZ	PHE	A	137	30.751	-13.824	5.087	1.00 36.88	C
ATOM	2155	CE2	PHE	A	137	31.470	-13.682	3.958	1.00 39.68	C
ATOM	2157	CD2	PHE	A	137	32.516	-12.809	3.922	1.00 43.99	C
ATOM	2159	C	PHE	A	137	36.106	-12.571	4.704	1.00 43.89	C
ATOM	2160	O	PHE	A	137	36.159	-13.774	4.828	1.00 41.80	O
ATOM	2161	N	ASP	A	138	36.778	-11.904	3.762	1.00 47.91	N
ATOM	2163	CA	ASP	A	138	37.627	-12.581	2.776	1.00 47.51	C
ATOM	2165	CB	ASP	A	138	38.618	-11.632	2.142	1.00 51.24	C
ATOM	2168	CG	ASP	A	138	38.290	-11.344	0.725	1.00 54.56	C
ATOM	2169	OD1	ASP	A	138	38.836	-12.027	-0.179	1.00 66.25	O
ATOM	2170	OD2	ASP	A	138	37.492	-10.434	0.419	1.00 57.65	O
ATOM	2171	C	ASP	A	138	38.436	-13.684	3.394	1.00 47.78	C
ATOM	2172	O	ASP	A	138	38.505	-14.788	2.886	1.00 57.75	O
ATOM	2173	N	SER	A	139	39.097	-13.385	4.482	1.00 46.16	N
ATOM	2175	CA	SER	A	139	39.868	-14.405	5.145	1.00 42.31	C
ATOM	2177	CB	SER	A	139	40.721	-13.740	6.204	1.00 42.45	C
ATOM	2180	OG	SER	A	139	41.538	-12.754	5.615	1.00 35.20	O
ATOM	2182	C	SER	A	139	38.967	-15.421	5.797	1.00 43.01	C
ATOM	2183	O	SER	A	139	39.302	-16.570	5.891	1.00 42.82	O
ATOM	2184	N	LEU	A	140	37.801	-15.016	6.279	1.00 50.41	N
ATOM	2186	CA	LEU	A	140	36.939	-15.973	7.006	1.00 46.59	C
ATOM	2188	CB	LEU	A	140	35.697	-15.302	7.483	1.00 47.69	C
ATOM	2191	CG	LEU	A	140	34.729	-16.175	8.248	1.00 54.03	C
ATOM	2193	CD1	LEU	A	140	35.440	-16.828	9.380	1.00 56.74	C
ATOM	2197	CD2	LEU	A	140	33.562	-15.327	8.755	1.00 52.27	C
ATOM	2201	C	LEU	A	140	36.541	-17.129	6.139	1.00 48.27	C
ATOM	2202	O	LEU	A	140	36.391	-18.231	6.649	1.00 48.66	O
ATOM	2203	N	VAL	A	141	36.363	-16.868	4.833	1.00 46.25	N
ATOM	2205	CA	VAL	A	141	36.054	-17.909	3.873	1.00 48.65	C
ATOM	2207	CB	VAL	A	141	35.281	-17.376	2.644	1.00 49.70	C
ATOM	2209	CG1	VAL	A	141	35.044	-18.555	1.662	1.00 50.68	C
ATOM	2213	CG2	VAL	A	141	33.952	-16.801	3.069	1.00 50.47	C
ATOM	2217	C	VAL	A	141	37.251	-18.777	3.388	1.00 54.04	C
ATOM	2218	O	VAL	A	141	37.121	-19.989	3.354	1.00 62.33	O
ATOM	2219	N	LYS	A	142	38.390	-18.195	3.009	1.00 53.50	N

ATOM	2221	CA	LYS	A	142	39.497	-18.997	2.510	1.00	51.72	C
ATOM	2223	CB	LYS	A	142	40.720	-18.173	2.027	1.00	51.19	C
ATOM	2226	CG	LYS	A	142	40.466	-16.996	1.006	1.00	55.43	C
ATOM	2229	CD	LYS	A	142	41.790	-16.385	0.423	1.00	59.35	C
ATOM	2232	CE	LYS	A	142	41.577	-15.659	-0.919	1.00	61.18	C
ATOM	2235	NZ	LYS	A	142	40.212	-15.043	-0.953	1.00	69.14	N
ATOM	2239	C	LYS	A	142	39.970	-20.002	3.571	1.00	52.97	C
ATOM	2240	O	LYS	A	142	40.643	-20.968	3.211	1.00	55.66	O
ATOM	2241	N	GLN	A	143	39.634	-19.800	4.851	1.00	47.49	N
ATOM	2243	CA	GLN	A	143	40.189	-20.638	5.937	1.00	47.98	C
ATOM	2245	CB	GLN	A	143	40.818	-19.777	7.058	1.00	44.95	C
ATOM	2248	CG	GLN	A	143	42.180	-19.165	6.780	1.00	45.74	C
ATOM	2251	CD	GLN	A	143	42.522	-17.951	7.691	1.00	52.26	C
ATOM	2252	OE1	GLN	A	143	42.548	-18.077	8.918	1.00	55.17	O
ATOM	2253	NE2	GLN	A	143	42.787	-16.783	7.081	1.00	48.24	N
ATOM	2256	C	GLN	A	143	39.190	-21.579	6.594	1.00	52.56	C
ATOM	2257	O	GLN	A	143	39.505	-22.219	7.600	1.00	57.47	O
ATOM	2258	N	THR	A	144	37.989	-21.675	6.041	1.00	59.44	N
ATOM	2260	CA	THR	A	144	36.913	-22.471	6.651	1.00	58.58	C
ATOM	2262	CB	THR	A	144	36.225	-21.737	7.797	1.00	56.28	C
ATOM	2264	OG1	THR	A	144	35.191	-20.904	7.267	1.00	60.07	O
ATOM	2266	CG2	THR	A	144	37.139	-20.769	8.490	1.00	59.12	C
ATOM	2270	C	THR	A	144	35.875	-22.756	5.581	1.00	59.57	C
ATOM	2271	O	THR	A	144	36.071	-22.385	4.425	1.00	61.12	O
ATOM	2272	N	HIS	A	145	34.772	-23.401	5.946	1.00	57.96	N
ATOM	2274	CA	HIS	A	145	33.786	-23.769	4.930	1.00	61.46	C
ATOM	2276	CB	HIS	A	145	33.315	-25.229	5.146	1.00	66.92	C
ATOM	2279	CG	HIS	A	145	34.393	-26.252	4.917	1.00	73.97	C
ATOM	2280	ND1	HIS	A	145	35.092	-26.844	5.950	1.00	78.11	N
ATOM	2282	CE1	HIS	A	145	35.980	-27.687	5.453	1.00	77.67	C
ATOM	2284	NE2	HIS	A	145	35.882	-27.665	4.134	1.00	76.27	N
ATOM	2286	CD2	HIS	A	145	34.897	-26.777	3.774	1.00	75.10	C
ATOM	2288	C	HIS	A	145	32.587	-22.826	4.899	1.00	57.13	C
ATOM	2289	O	HIS	A	145	31.592	-23.086	4.214	1.00	57.76	O
ATOM	2290	N	VAL	A	146	32.679	-21.728	5.629	1.00	52.17	N
ATOM	2292	CA	VAL	A	146	31.539	-20.847	5.769	1.00	47.04	C
ATOM	2294	CB	VAL	A	146	31.849	-19.669	6.681	1.00	48.57	C
ATOM	2296	CG1	VAL	A	146	30.713	-18.715	6.687	1.00	48.07	C
ATOM	2300	CG2	VAL	A	146	32.122	-20.147	8.110	1.00	49.78	C
ATOM	2304	C	VAL	A	146	31.247	-20.301	4.426	1.00	42.53	C
ATOM	2305	O	VAL	A	146	32.116	-19.728	3.817	1.00	45.79	O
ATOM	2306	N	PRO	A	147	30.029	-20.472	3.950	1.00	37.44	N
ATOM	2307	CA	PRO	A	147	29.613	-19.931	2.649	1.00	36.28	C
ATOM	2309	CB	PRO	A	147	28.139	-20.275	2.599	1.00	38.81	C
ATOM	2312	CG	PRO	A	147	28.062	-21.485	3.451	1.00	37.97	C
ATOM	2315	CD	PRO	A	147	28.953	-21.213	4.609	1.00	37.03	C
ATOM	2318	C	PRO	A	147	29.793	-18.397	2.535	1.00	38.62	C
ATOM	2319	O	PRO	A	147	29.688	-17.668	3.519	1.00	36.50	O
ATOM	2320	N	ASN	A	148	30.042	-17.926	1.318	1.00	37.03	N
ATOM	2322	CA	ASN	A	148	30.370	-16.536	1.041	1.00	35.69	C
ATOM	2324	CB	ASN	A	148	31.113	-16.480	-0.280	1.00	35.18	C
ATOM	2327	CG	ASN	A	148	31.791	-15.208	-0.460	1.00	38.29	C
ATOM	2328	OD1	ASN	A	148	31.990	-14.492	0.507	1.00	48.87	O
ATOM	2329	ND2	ASN	A	148	32.170	-14.888	-1.683	1.00	45.21	N
ATOM	2332	C	ASN	A	148	29.184	-15.584	0.950	1.00	37.44	C
ATOM	2333	O	ASN	A	148	28.928	-14.994	-0.110	1.00	34.38	O
ATOM	2334	N	LEU	A	149	28.498	-15.407	2.075	1.00	39.14	N

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ATOM   2336  CA  LEU A 149      27.269 -14.634   2.168  1.00 37.49           C
ATOM   2338  CB  LEU A 149      26.071 -15.476   1.699  1.00 38.02           C
ATOM   2341  CG  LEU A 149      24.571 -15.300   2.049  1.00 45.01           C
ATOM   2343  CD1 LEU A 149      23.843 -16.146   1.018  1.00 46.47           C
ATOM   2347  CD2 LEU A 149      24.051 -15.748   3.449  1.00 46.97           C
ATOM   2351  C   LEU A 149      27.073 -14.349   3.619  1.00 41.29           C
ATOM   2352  O   LEU A 149      27.374 -15.200   4.445  1.00 43.07           O
ATOM   2353  N   PHE A 150      26.597 -13.160   3.957  1.00 43.88           N
ATOM   2355  CA  PHE A 150      26.128 -12.896   5.313  1.00 37.90           C
ATOM   2357  CB  PHE A 150      27.151 -12.168   6.146  1.00 36.97           C
ATOM   2360  CG  PHE A 150      27.514 -10.855   5.616  1.00 38.62           C
ATOM   2361  CD1 PHE A 150      28.508 -10.731   4.664  1.00 43.40           C
ATOM   2363  CE1 PHE A 150      28.849  -9.516   4.157  1.00 36.52           C
ATOM   2365  CZ  PHE A 150      28.202  -8.415   4.609  1.00 39.56           C
ATOM   2367  CE2 PHE A 150      27.220  -8.530   5.564  1.00 32.53           C
ATOM   2369  CD2 PHE A 150      26.885  -9.737   6.055  1.00 36.36           C
ATOM   2371  C   PHE A 150      24.854 -12.097   5.122  1.00 41.04           C
ATOM   2372  O   PHE A 150      24.632 -11.537   4.054  1.00 41.82           O
ATOM   2373  N   SER A 151      23.980 -12.071   6.121  1.00 44.62           N
ATOM   2375  CA  SER A 151      22.760 -11.287   6.018  1.00 40.62           C
ATOM   2377  CB  SER A 151      21.553 -12.207   5.931  1.00 43.08           C
ATOM   2380  OG  SER A 151      21.673 -13.313   6.803  1.00 53.44           O
ATOM   2382  C   SER A 151      22.708 -10.401   7.238  1.00 39.25           C
ATOM   2383  O   SER A 151      23.371 -10.749   8.190  1.00 40.13           O
ATOM   2384  N   LEU A 152      21.985  -9.260   7.214  1.00 38.62           N
ATOM   2386  CA  LEU A 152      21.755  -8.448   8.435  1.00 36.45           C
ATOM   2388  CB  LEU A 152      22.588  -7.166   8.446  1.00 35.08           C
ATOM   2391  CG  LEU A 152      24.121  -7.237   8.489  1.00 29.92           C
ATOM   2393  CD1 LEU A 152      24.769  -5.957   8.014  1.00 28.56           C
ATOM   2397  CD2 LEU A 152      24.536  -7.467   9.812  1.00 30.11           C
ATOM   2401  C   LEU A 152      20.305  -8.042   8.672  1.00 37.58           C
ATOM   2402  O   LEU A 152      19.591  -7.681   7.756  1.00 49.31           O
ATOM   2403  N   GLN A 153      19.877  -8.069   9.925  1.00 42.17           N
ATOM   2405  CA  GLN A 153      18.544  -7.609  10.332  1.00 37.31           C
ATOM   2407  CB  GLN A 153      17.636  -8.817  10.719  1.00 34.23           C
ATOM   2410  CG  GLN A 153      16.211  -8.478  11.173  1.00 38.27           C
ATOM   2413  CD  GLN A 153      15.562  -9.519  12.109  1.00 47.39           C
ATOM   2414  OE1 GLN A 153      16.047  -9.755  13.231  1.00 58.66           O
ATOM   2415  NE2 GLN A 153      14.465 -10.125  11.663  1.00 39.51           N
ATOM   2418  C   GLN A 153      18.798  -6.689  11.532  1.00 39.67           C
ATOM   2419  O   GLN A 153      18.980  -7.157  12.638  1.00 47.11           O
ATOM   2420  N   LEU A 154      18.830  -5.384  11.320  1.00 42.61           N
ATOM   2422  CA  LEU A 154      19.057  -4.410  12.397  1.00 42.93           C
ATOM   2424  CB  LEU A 154      19.826  -3.221  11.839  1.00 45.84           C
ATOM   2427  CG  LEU A 154      21.012  -3.514  10.947  1.00 40.27           C
ATOM   2429  CD1 LEU A 154      21.452  -2.253  10.295  1.00 42.77           C
ATOM   2433  CD2 LEU A 154      22.137  -4.067  11.759  1.00 42.65           C
ATOM   2437  C   LEU A 154      17.700  -3.937  12.912  1.00 42.07           C
ATOM   2438  O   LEU A 154      16.804  -3.804  12.136  1.00 50.21           O
ATOM   2439  N   CYS A 155      17.538  -3.646  14.191  1.00 45.97           N
ATOM   2441  CA  CYS A 155      16.180  -3.612  14.763  1.00 51.90           C
ATOM   2443  CB  CYS A 155      15.927  -4.865  15.662  1.00 51.86           C
ATOM   2446  SG  CYS A 155      15.554  -6.528  14.975  1.00 51.81           S
ATOM   2447  C   CYS A 155      15.967  -2.390  15.642  1.00 57.62           C
ATOM   2448  O   CYS A 155      16.114  -2.476  16.878  1.00 63.11           O
ATOM   2449  N   GLY A 156      15.631  -1.257  15.041  1.00 58.85           N
ATOM   2451  CA  GLY A 156      15.380  -0.072  15.830  1.00 62.65           C
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ATOM	2454	C	GLY	A	156	14.226	-0.446	16.728	1.00 66.48	C
ATOM	2455	O	GLY	A	156	13.447	-1.309	16.342	1.00 69.64	O
ATOM	2456	N	ALA	A	157	14.088	0.144	17.910	1.00 69.44	N
ATOM	2458	CA	ALA	A	157	12.896	-0.169	18.704	1.00 72.46	C
ATOM	2460	CB	ALA	A	157	13.304	-0.588	20.111	1.00 75.06	C
ATOM	2464	C	ALA	A	157	11.799	0.960	18.698	1.00 73.42	C
ATOM	2465	O	ALA	A	157	10.749	0.888	19.359	1.00 73.68	O
ATOM	2466	N	GLY	A	158	12.015	2.000	17.926	1.00 74.47	N
ATOM	2468	CA	GLY	A	158	11.010	3.043	17.837	1.00 78.58	C
ATOM	2471	C	GLY	A	158	10.829	3.954	19.059	1.00 82.73	C
ATOM	2472	O	GLY	A	158	9.947	4.825	19.033	1.00 85.96	O
ATOM	2473	N	PHE	A	159	11.633	3.774	20.115	1.00 83.55	N
ATOM	2475	CA	PHE	A	159	11.564	4.626	21.313	1.00 85.05	C
ATOM	2477	CB	PHE	A	159	10.558	4.054	22.277	1.00 85.74	C
ATOM	2480	CG	PHE	A	159	10.993	2.748	22.855	1.00 82.94	C
ATOM	2481	CD1	PHE	A	159	10.305	1.593	22.561	1.00 82.82	C
ATOM	2483	CE1	PHE	A	159	10.717	0.373	23.096	1.00 83.66	C
ATOM	2485	CZ	PHE	A	159	11.831	0.325	23.935	1.00 82.59	C
ATOM	2487	CE2	PHE	A	159	12.519	1.491	24.228	1.00 80.31	C
ATOM	2489	CD2	PHE	A	159	12.099	2.683	23.686	1.00 79.87	C
ATOM	2491	C	PHE	A	159	12.910	4.671	22.044	1.00 87.61	C
ATOM	2492	O	PHE	A	159	13.494	3.624	22.302	1.00 87.56	O
ATOM	2493	N	PRO	A	160	13.383	5.862	22.418	1.00 89.61	N
ATOM	2494	CA	PRO	A	160	14.743	6.031	22.954	1.00 91.86	C
ATOM	2496	CB	PRO	A	160	14.714	7.423	23.610	1.00 92.67	C
ATOM	2499	CG	PRO	A	160	13.501	8.102	23.127	1.00 90.33	C
ATOM	2502	CD	PRO	A	160	12.656	7.139	22.372	1.00 90.15	C
ATOM	2505	C	PRO	A	160	15.261	5.019	23.970	1.00 91.59	C
ATOM	2506	O	PRO	A	160	14.535	4.311	24.654	1.00 87.47	O
ATOM	2507	N	LEU	A	161	16.582	5.002	24.046	1.00 94.49	N
ATOM	2509	CA	LEU	A	161	17.318	4.103	24.906	1.00 97.03	C
ATOM	2511	CB	LEU	A	161	17.885	2.918	24.078	1.00 96.28	C
ATOM	2514	CG	LEU	A	161	17.017	1.707	23.671	1.00 94.82	C
ATOM	2516	CD1	LEU	A	161	17.658	0.923	22.493	1.00 93.82	C
ATOM	2520	CD2	LEU	A	161	16.735	0.783	24.864	1.00 93.08	C
ATOM	2524	C	LEU	A	161	18.475	4.906	25.503	1.00 98.82	C
ATOM	2525	O	LEU	A	161	18.848	5.967	24.987	1.00 98.25	O
ATOM	2526	N	GLN	A	162	19.013	4.404	26.608	1.00101.00	N
ATOM	2528	CA	GLN	A	162	20.290	4.865	27.135	1.00101.95	C
ATOM	2530	CB	GLN	A	162	20.225	5.088	28.660	1.00103.13	C
ATOM	2533	CG	GLN	A	162	19.060	5.934	29.201	1.00102.96	C
ATOM	2536	CD	GLN	A	162	18.651	5.522	30.624	1.00104.66	C
ATOM	2537	OE1	GLN	A	162	17.703	6.076	31.190	1.00104.03	O
ATOM	2538	NE2	GLN	A	162	19.365	4.548	31.196	1.00103.68	N
ATOM	2541	C	GLN	A	162	21.315	3.748	26.850	1.00102.26	C
ATOM	2542	O	GLN	A	162	20.958	2.612	26.522	1.00 99.57	O
ATOM	2543	N	GLN	A	163	22.593	4.079	26.965	1.00104.53	N
ATOM	2545	CA	GLN	A	163	23.655	3.073	26.995	1.00105.21	C
ATOM	2547	CB	GLN	A	163	24.906	3.716	27.567	1.00105.72	C
ATOM	2550	CG	GLN	A	163	26.028	2.741	27.928	1.00105.46	C
ATOM	2553	CD	GLN	A	163	27.384	3.435	27.930	1.00103.07	C
ATOM	2554	OE1	GLN	A	163	27.767	4.048	28.924	1.00 96.11	O
ATOM	2555	NE2	GLN	A	163	28.105	3.345	26.814	1.00101.46	N
ATOM	2558	C	GLN	A	163	23.314	1.874	27.894	1.00105.84	C
ATOM	2559	O	GLN	A	163	23.625	0.716	27.561	1.00105.65	O
ATOM	2560	N	SER	A	164	22.684	2.167	29.034	1.00105.53	N
ATOM	2562	CA	SER	A	164	22.315	1.146	30.020	1.00105.77	C

ATOM	2564	CB	SER A 164	21.632	1.798	31.227	1.00	106.94		C
ATOM	2567	OG	SER A 164	21.798	1.017	32.400	1.00	107.14		O
ATOM	2569	C	SER A 164	21.335	0.192	29.374	1.00	105.64		C
ATOM	2570	O	SER A 164	21.407	-1.065	29.492	1.00	105.75		O
ATOM	2571	N	GLU A 165	20.403	0.835	28.682	1.00	102.30		N
ATOM	2573	CA	GLU A 165	19.381	0.105	27.976	1.00	98.16		C
ATOM	2575	CB	GLU A 165	18.355	1.082	27.415	1.00	98.15		C
ATOM	2578	CG	GLU A 165	17.997	2.126	28.479	1.00	99.91		C
ATOM	2581	CD	GLU A 165	16.584	2.687	28.403	1.00	98.66		C
ATOM	2582	OE1	GLU A 165	15.621	1.933	28.642	1.00	94.69		O
ATOM	2583	OE2	GLU A 165	16.444	3.900	28.123	1.00	100.25		O
ATOM	2584	C	GLU A 165	20.072	-0.690	26.891	1.00	95.52		C
ATOM	2585	O	GLU A 165	19.903	-1.909	26.807	1.00	92.32		O
ATOM	2586	N	VAL A 166	20.884	0.002	26.095	1.00	92.23		N
ATOM	2588	CA	VAL A 166	21.552	-0.618	24.959	1.00	90.08		C
ATOM	2590	CB	VAL A 166	22.637	0.280	24.385	1.00	89.46		C
ATOM	2592	CG1	VAL A 166	23.997	-0.471	24.238	1.00	89.54		C
ATOM	2596	CG2	VAL A 166	22.180	0.834	23.067	1.00	89.64		C
ATOM	2600	C	VAL A 166	22.155	-1.969	25.275	1.00	89.54		C
ATOM	2601	O	VAL A 166	21.868	-2.949	24.587	1.00	90.45		O
ATOM	2602	N	LEU A 167	22.988	-2.039	26.306	1.00	89.05		N
ATOM	2604	CA	LEU A 167	23.644	-3.308	26.620	1.00	88.10		C
ATOM	2606	CB	LEU A 167	24.572	-3.201	27.852	1.00	87.51		C
ATOM	2609	CG	LEU A 167	25.665	-2.130	27.780	1.00	89.06		C
ATOM	2611	CD1	LEU A 167	25.990	-1.526	29.151	1.00	88.01		C
ATOM	2615	CD2	LEU A 167	26.921	-2.670	27.122	1.00	88.50		C
ATOM	2619	C	LEU A 167	22.606	-4.403	26.851	1.00	84.50		C
ATOM	2620	O	LEU A 167	22.770	-5.521	26.386	1.00	82.46		O
ATOM	2621	N	ALA A 168	21.533	-4.071	27.554	1.00	82.79		N
ATOM	2623	CA	ALA A 168	20.565	-5.083	27.974	1.00	83.99		C
ATOM	2625	CB	ALA A 168	19.807	-4.567	29.200	1.00	84.06		C
ATOM	2629	C	ALA A 168	19.560	-5.604	26.929	1.00	84.00		C
ATOM	2630	O	ALA A 168	18.918	-6.627	27.179	1.00	83.07		O
ATOM	2631	N	SER A 169	19.423	-4.940	25.776	1.00	82.75		N
ATOM	2633	CA	SER A 169	18.339	-5.295	24.845	1.00	82.41		C
ATOM	2635	CB	SER A 169	17.199	-4.258	24.968	1.00	83.85		C
ATOM	2638	OG	SER A 169	16.810	-4.032	26.327	1.00	80.23		O
ATOM	2640	C	SER A 169	18.735	-5.521	23.349	1.00	81.77		C
ATOM	2641	O	SER A 169	19.377	-4.675	22.718	1.00	80.20		O
ATOM	2642	N	VAL A 170	18.303	-6.674	22.816	1.00	79.25		N
ATOM	2644	CA	VAL A 170	18.634	-7.170	21.469	1.00	74.78		C
ATOM	2646	CB	VAL A 170	17.885	-8.506	21.198	1.00	76.32		C
ATOM	2648	CG1	VAL A 170	18.278	-9.111	19.831	1.00	75.02		C
ATOM	2652	CG2	VAL A 170	18.143	-9.504	22.334	1.00	77.47		C
ATOM	2656	C	VAL A 170	18.329	-6.185	20.326	1.00	70.08		C
ATOM	2657	O	VAL A 170	17.197	-5.720	20.160	1.00	70.47		O
ATOM	2658	N	GLY A 171	19.345	-5.895	19.525	1.00	58.93		N
ATOM	2660	CA	GLY A 171	19.208	-4.921	18.482	1.00	51.34		C
ATOM	2663	C	GLY A 171	19.305	-5.525	17.115	1.00	47.82		C
ATOM	2664	O	GLY A 171	19.166	-4.812	16.149	1.00	51.16		O
ATOM	2665	N	GLY A 172	19.548	-6.821	16.992	1.00	43.16		N
ATOM	2667	CA	GLY A 172	19.604	-7.381	15.654	1.00	40.82		C
ATOM	2670	C	GLY A 172	20.369	-8.678	15.473	1.00	42.31		C
ATOM	2671	O	GLY A 172	20.653	-9.404	16.439	1.00	39.19		O
ATOM	2672	N	SER A 173	20.705	-8.960	14.214	1.00	39.65		N
ATOM	2674	CA	SER A 173	21.301	-10.233	13.857	1.00	37.97		C
ATOM	2676	CB	SER A 173	20.194	-11.203	13.497	1.00	36.33		C

ATOM	2679	OG	SER	A	173	19.416	-11.435	14.634	1.00 46.54	O
ATOM	2681	C	SER	A	173	22.205	-10.181	12.664	1.00 39.01	C
ATOM	2682	O	SER	A	173	21.805	-9.673	11.590	1.00 36.11	O
ATOM	2683	N	MET	A	174	23.411	-10.705	12.853	1.00 35.19	N
ATOM	2685	CA	MET	A	174	24.339	-10.883	11.749	1.00 40.44	C
ATOM	2687	CB	MET	A	174	25.676	-10.261	12.040	1.00 40.55	C
ATOM	2690	CG	MET	A	174	26.481	-10.176	10.760	1.00 45.60	C
ATOM	2693	SD	MET	A	174	28.136	-9.627	10.960	1.00 47.63	S
ATOM	2694	CE	MET	A	174	28.387	-10.094	12.700	1.00 54.56	C
ATOM	2698	C	MET	A	174	24.483	-12.394	11.516	1.00 41.84	C
ATOM	2699	O	MET	A	174	25.013	-13.111	12.356	1.00 48.31	O
ATOM	2700	N	ILE	A	175	24.003	-12.875	10.383	1.00 38.41	N
ATOM	2702	CA	ILE	A	175	23.939	-14.288	10.136	1.00 37.39	C
ATOM	2704	CB	ILE	A	175	22.628	-14.676	9.443	1.00 39.69	C
ATOM	2706	CG1	ILE	A	175	21.448	-14.387	10.364	1.00 40.97	C
ATOM	2709	CD1	ILE	A	175	21.449	-15.213	11.578	1.00 36.79	C
ATOM	2713	CG2	ILE	A	175	22.653	-16.089	9.035	1.00 35.35	C
ATOM	2717	C	ILE	A	175	25.021	-14.522	9.202	1.00 38.73	C
ATOM	2718	O	ILE	A	175	24.892	-14.246	8.037	1.00 40.30	O
ATOM	2719	N	ILE	A	176	26.109	-15.038	9.722	1.00 42.09	N
ATOM	2721	CA	ILE	A	176	27.257	-15.301	8.926	1.00 37.74	C
ATOM	2723	CB	ILE	A	176	28.382	-15.377	9.844	1.00 35.36	C
ATOM	2725	CG1	ILE	A	176	28.371	-14.125	10.699	1.00 32.86	C
ATOM	2728	CD1	ILE	A	176	29.740	-13.602	11.051	1.00 37.77	C
ATOM	2732	CG2	ILE	A	176	29.673	-15.621	9.060	1.00 38.65	C
ATOM	2736	C	ILE	A	176	27.119	-16.617	8.202	1.00 43.85	C
ATOM	2737	O	ILE	A	176	27.178	-17.681	8.802	1.00 49.67	O
ATOM	2738	N	GLY	A	177	26.890	-16.568	6.912	1.00 44.93	N
ATOM	2740	CA	GLY	A	177	27.003	-17.783	6.139	1.00 45.46	C
ATOM	2743	C	GLY	A	177	25.734	-18.428	5.673	1.00 42.70	C
ATOM	2744	O	GLY	A	177	25.751	-19.498	5.054	1.00 47.24	O
ATOM	2745	N	GLY	A	178	24.619	-17.791	5.934	1.00 40.94	N
ATOM	2747	CA	GLY	A	178	23.369	-18.400	5.553	1.00 38.84	C
ATOM	2750	C	GLY	A	178	22.355	-17.317	5.705	1.00 36.04	C
ATOM	2751	O	GLY	A	178	22.754	-16.229	6.066	1.00 32.65	O
ATOM	2752	N	ILE	A	179	21.086	-17.636	5.418	1.00 38.29	N
ATOM	2754	CA	ILE	A	179	19.922	-16.748	5.502	1.00 36.73	C
ATOM	2756	CB	ILE	A	179	19.262	-16.733	4.137	1.00 38.18	C
ATOM	2758	CG1	ILE	A	179	20.269	-16.324	3.069	1.00 38.79	C
ATOM	2761	CD1	ILE	A	179	19.789	-16.538	1.644	1.00 37.73	C
ATOM	2765	CG2	ILE	A	179	18.144	-15.825	4.105	1.00 40.58	C
ATOM	2769	C	ILE	A	179	19.019	-17.446	6.489	1.00 39.59	C
ATOM	2770	O	ILE	A	179	18.914	-18.666	6.450	1.00 42.86	O
ATOM	2771	N	ASP	A	180	18.355	-16.727	7.387	1.00 43.92	N
ATOM	2773	CA	ASP	A	180	17.497	-17.405	8.388	1.00 40.32	C
ATOM	2775	CB	ASP	A	180	17.913	-17.030	9.788	1.00 42.54	C
ATOM	2778	CG	ASP	A	180	16.967	-17.607	10.824	1.00 45.20	C
ATOM	2779	OD1	ASP	A	180	17.452	-17.999	11.899	1.00 38.88	O
ATOM	2780	OD2	ASP	A	180	15.717	-17.695	10.630	1.00 43.52	O
ATOM	2781	C	ASP	A	180	16.012	-17.138	8.278	1.00 38.18	C
ATOM	2782	O	ASP	A	180	15.533	-16.094	8.669	1.00 44.65	O
ATOM	2783	N	HIS	A	181	15.272	-18.105	7.782	1.00 42.63	N
ATOM	2785	CA	HIS	A	181	13.864	-17.928	7.490	1.00 41.71	C
ATOM	2787	CB	HIS	A	181	13.320	-19.226	6.973	1.00 48.30	C
ATOM	2790	CG	HIS	A	181	13.911	-19.569	5.657	1.00 63.31	C
ATOM	2791	ND1	HIS	A	181	13.525	-18.933	4.495	1.00 74.50	N
ATOM	2793	CE1	HIS	A	181	14.230	-19.409	3.483	1.00 79.36	C

ATOM	2795	NE2	HIS	A	181	15.065	-20.328	3.950	1.00	79.27	N
ATOM	2797	CD2	HIS	A	181	14.890	-20.439	5.310	1.00	71.55	C
ATOM	2799	C	HIS	A	181	12.983	-17.340	8.538	1.00	37.16	C
ATOM	2800	O	HIS	A	181	11.899	-16.873	8.232	1.00	39.58	O
ATOM	2801	N	SER	A	182	13.421	-17.329	9.773	1.00	37.68	N
ATOM	2803	CA	SER	A	182	12.603	-16.703	10.793	1.00	41.51	C
ATOM	2805	CB	SER	A	182	12.986	-17.234	12.149	1.00	42.17	C
ATOM	2808	OG	SER	A	182	14.344	-16.913	12.339	1.00	43.89	O
ATOM	2810	C	SER	A	182	12.765	-15.204	10.848	1.00	39.23	C
ATOM	2811	O	SER	A	182	12.013	-14.548	11.554	1.00	46.71	O
ATOM	2812	N	LEU	A	183	13.730	-14.644	10.130	1.00	38.97	N
ATOM	2814	CA	LEU	A	183	13.967	-13.201	10.197	1.00	35.60	C
ATOM	2816	CB	LEU	A	183	15.456	-12.924	10.189	1.00	33.38	C
ATOM	2819	CG	LEU	A	183	16.258	-13.474	11.374	1.00	31.83	C
ATOM	2821	CD1	LEU	A	183	17.709	-13.477	11.088	1.00	31.76	C
ATOM	2825	CD2	LEU	A	183	16.069	-12.666	12.607	1.00	41.82	C
ATOM	2829	C	LEU	A	183	13.318	-12.400	9.068	1.00	38.07	C
ATOM	2830	O	LEU	A	183	13.701	-11.288	8.820	1.00	42.04	O
ATOM	2831	N	TYR	A	184	12.336	-12.956	8.367	1.00	44.43	N
ATOM	2833	CA	TYR	A	184	11.639	-12.209	7.320	1.00	33.34	C
ATOM	2835	CB	TYR	A	184	12.516	-12.087	6.063	1.00	38.72	C
ATOM	2838	CG	TYR	A	184	12.775	-13.281	5.134	1.00	35.86	C
ATOM	2839	CD1	TYR	A	184	13.928	-14.047	5.248	1.00	43.79	C
ATOM	2841	CE1	TYR	A	184	14.184	-15.099	4.406	1.00	39.71	C
ATOM	2843	CZ	TYR	A	184	13.294	-15.400	3.426	1.00	40.90	C
ATOM	2844	OH	TYR	A	184	13.537	-16.460	2.577	1.00	45.55	O
ATOM	2846	CE2	TYR	A	184	12.159	-14.656	3.277	1.00	38.72	C
ATOM	2848	CD2	TYR	A	184	11.911	-13.599	4.127	1.00	36.47	C
ATOM	2850	C	TYR	A	184	10.304	-12.811	7.005	1.00	36.16	C
ATOM	2851	O	TYR	A	184	10.067	-13.961	7.352	1.00	30.88	O
ATOM	2852	N	THR	A	185	9.419	-12.023	6.383	1.00	37.93	N
ATOM	2854	CA	THR	A	185	8.171	-12.549	5.846	1.00	40.81	C
ATOM	2856	CB	THR	A	185	6.922	-11.913	6.441	1.00	43.15	C
ATOM	2858	OG1	THR	A	185	6.918	-10.491	6.207	1.00	43.97	O
ATOM	2860	CG2	THR	A	185	6.843	-12.140	7.970	1.00	42.48	C
ATOM	2864	C	THR	A	185	8.152	-12.271	4.378	1.00	37.63	C
ATOM	2865	O	THR	A	185	8.862	-11.408	3.929	1.00	36.37	O
ATOM	2866	N	GLY	A	186	7.321	-12.992	3.637	1.00	34.86	N
ATOM	2868	CA	GLY	A	186	7.221	-12.791	2.205	1.00	37.11	C
ATOM	2871	C	GLY	A	186	8.449	-13.300	1.469	1.00	38.69	C
ATOM	2872	O	GLY	A	186	9.179	-14.161	1.954	1.00	44.04	O
ATOM	2873	N	SER	A	187	8.667	-12.736	0.288	1.00	41.42	N
ATOM	2875	CA	SER	A	187	9.797	-13.062	-0.552	1.00	43.18	C
ATOM	2877	CB	SER	A	187	9.346	-13.063	-1.989	1.00	50.00	C
ATOM	2880	OG	SER	A	187	8.254	-13.936	-2.139	1.00	54.96	O
ATOM	2882	C	SER	A	187	10.934	-12.059	-0.443	1.00	44.84	C
ATOM	2883	O	SER	A	187	10.749	-10.938	0.064	1.00	42.30	O
ATOM	2884	N	LEU	A	188	12.094	-12.514	-0.943	1.00	39.28	N
ATOM	2886	CA	LEU	A	188	13.369	-11.810	-1.031	1.00	33.66	C
ATOM	2888	CB	LEU	A	188	14.482	-12.824	-0.789	1.00	28.67	C
ATOM	2891	CG	LEU	A	188	15.028	-12.884	0.614	1.00	36.42	C
ATOM	2893	CD1	LEU	A	188	15.736	-14.211	0.813	1.00	40.88	C
ATOM	2897	CD2	LEU	A	188	15.971	-11.777	0.889	1.00	34.49	C
ATOM	2901	C	LEU	A	188	13.515	-11.417	-2.474	1.00	31.52	C
ATOM	2902	O	LEU	A	188	13.359	-12.268	-3.294	1.00	41.60	O
ATOM	2903	N	TRP	A	189	13.803	-10.177	-2.822	1.00	31.35	N
ATOM	2905	CA	TRP	A	189	14.040	-9.830	-4.230	1.00	33.70	C

ATOM	2907	CB	TRP	A	189	13.132	-8.688	-4.683	1.00	39.33	C
ATOM	2910	CG	TRP	A	189	11.729	-9.074	-4.947	1.00	37.95	C
ATOM	2911	CD1	TRP	A	189	10.779	-9.313	-4.033	1.00	35.87	C
ATOM	2913	NE1	TRP	A	189	9.600	-9.646	-4.649	1.00	34.16	N
ATOM	2915	CE2	TRP	A	189	9.790	-9.626	-6.001	1.00	38.81	C
ATOM	2916	CD2	TRP	A	189	11.125	-9.267	-6.224	1.00	35.31	C
ATOM	2917	CE3	TRP	A	189	11.586	-9.181	-7.539	1.00	35.10	C
ATOM	2919	CZ3	TRP	A	189	10.725	-9.447	-8.559	1.00	43.54	C
ATOM	2921	CH2	TRP	A	189	9.384	-9.805	-8.305	1.00	44.03	C
ATOM	2923	CZ2	TRP	A	189	8.904	-9.898	-7.034	1.00	40.92	C
ATOM	2925	C	TRP	A	189	15.493	-9.361	-4.344	1.00	34.18	C
ATOM	2926	O	TRP	A	189	15.950	-8.570	-3.567	1.00	34.73	O
ATOM	2927	N	TYR	A	190	16.217	-9.852	-5.317	1.00	34.76	N
ATOM	2929	CA	TYR	A	190	17.603	-9.539	-5.412	1.00	36.58	C
ATOM	2931	CB	TYR	A	190	18.341	-10.800	-5.769	1.00	38.76	C
ATOM	2934	CG	TYR	A	190	18.382	-11.826	-4.657	1.00	40.52	C
ATOM	2935	CD1	TYR	A	190	17.485	-12.875	-4.609	1.00	43.16	C
ATOM	2937	CE1	TYR	A	190	17.541	-13.817	-3.580	1.00	43.91	C
ATOM	2939	CZ	TYR	A	190	18.506	-13.685	-2.615	1.00	42.77	C
ATOM	2940	OH	TYR	A	190	18.608	-14.594	-1.566	1.00	46.77	O
ATOM	2942	CE2	TYR	A	190	19.384	-12.642	-2.677	1.00	35.63	C
ATOM	2944	CD2	TYR	A	190	19.327	-11.742	-3.668	1.00	35.67	C
ATOM	2946	C	TYR	A	190	17.886	-8.451	-6.430	1.00	38.30	C
ATOM	2947	O	TYR	A	190	17.248	-8.420	-7.424	1.00	34.41	O
ATOM	2948	N	THR	A	191	18.850	-7.567	-6.133	1.00	41.18	N
ATOM	2950	CA	THR	A	191	19.299	-6.512	-7.025	1.00	37.26	C
ATOM	2952	CB	THR	A	191	19.056	-5.091	-6.438	1.00	38.25	C
ATOM	2954	OG1	THR	A	191	19.283	-4.111	-7.448	1.00	41.41	O
ATOM	2956	CG2	THR	A	191	20.057	-4.689	-5.419	1.00	31.07	C
ATOM	2960	C	THR	A	191	20.782	-6.721	-7.200	1.00	39.94	C
ATOM	2961	O	THR	A	191	21.489	-7.008	-6.264	1.00	41.73	O
ATOM	2962	N	PRO	A	192	21.281	-6.578	-8.395	1.00	39.23	N
ATOM	2963	CA	PRO	A	192	22.679	-6.840	-8.617	1.00	39.19	C
ATOM	2965	CB	PRO	A	192	22.824	-6.565	-10.111	1.00	41.47	C
ATOM	2968	CG	PRO	A	192	21.484	-6.730	-10.671	1.00	36.70	C
ATOM	2971	CD	PRO	A	192	20.603	-6.152	-9.629	1.00	41.63	C
ATOM	2974	C	PRO	A	192	23.568	-5.885	-7.860	1.00	41.91	C
ATOM	2975	O	PRO	A	192	23.164	-4.808	-7.531	1.00	43.47	O
ATOM	2976	N	ILE	A	193	24.784	-6.324	-7.580	1.00	46.52	N
ATOM	2978	CA	ILE	A	193	25.827	-5.467	-7.076	1.00	42.19	C
ATOM	2980	CB	ILE	A	193	26.764	-6.250	-6.239	1.00	38.18	C
ATOM	2982	CG1	ILE	A	193	26.159	-6.585	-4.906	1.00	41.41	C
ATOM	2985	CD1	ILE	A	193	27.036	-7.645	-4.107	1.00	45.77	C
ATOM	2989	CG2	ILE	A	193	27.961	-5.447	-5.994	1.00	42.22	C
ATOM	2993	C	ILE	A	193	26.603	-5.049	-8.313	1.00	44.50	C
ATOM	2994	O	ILE	A	193	27.213	-5.903	-8.984	1.00	44.15	O
ATOM	2995	N	ARG	A	194	26.596	-3.762	-8.626	1.00	44.93	N
ATOM	2997	CA	ARG	A	194	27.234	-3.288	-9.846	1.00	47.47	C
ATOM	2999	CB	ARG	A	194	26.904	-1.813	-10.032	1.00	52.04	C
ATOM	3002	CG	ARG	A	194	27.273	-1.190	-11.424	1.00	54.84	C
ATOM	3005	CD	ARG	A	194	27.414	0.291	-11.320	1.00	51.97	C
ATOM	3008	NE	ARG	A	194	27.329	1.055	-12.548	1.00	49.01	N
ATOM	3010	CZ	ARG	A	194	27.591	2.367	-12.600	1.00	45.93	C
ATOM	3011	NH1	ARG	A	194	27.960	3.039	-11.509	1.00	41.67	N
ATOM	3014	NH2	ARG	A	194	27.492	3.018	-13.742	1.00	51.03	N
ATOM	3017	C	ARG	A	194	28.763	-3.469	-9.869	1.00	53.38	C
ATOM	3018	O	ARG	A	194	29.331	-3.747	-10.924	1.00	57.83	O

ATOM	3019	N	ARG	A	195	29.433	-3.341	-8.723	1.00 49.23	N
ATOM	3021	CA	ARG	A	195	30.887	-3.378	-8.698	1.00 49.56	C
ATOM	3023	CB	ARG	A	195	31.470	-1.973	-8.965	1.00 49.15	C
ATOM	3026	CG	ARG	A	195	32.684	-1.929	-9.832	1.00 45.49	C
ATOM	3029	CD	ARG	A	195	33.888	-1.211	-9.229	1.00 54.35	C
ATOM	3032	NE	ARG	A	195	33.658	0.142	-8.774	1.00 52.34	N
ATOM	3034	CZ	ARG	A	195	34.625	0.982	-8.430	1.00 58.59	C
ATOM	3035	NH1	ARG	A	195	35.892	0.624	-8.476	1.00 59.01	N
ATOM	3038	NH2	ARG	A	195	34.335	2.210	-8.029	1.00 62.23	N
ATOM	3041	C	ARG	A	195	31.317	-3.740	-7.314	1.00 51.05	C
ATOM	3042	O	ARG	A	195	30.795	-3.169	-6.362	1.00 44.37	O
ATOM	3043	N	GLU	A	196	32.281	-4.648	-7.173	1.00 52.25	N
ATOM	3045	CA	GLU	A	196	32.723	-4.988	-5.831	1.00 53.43	C
ATOM	3047	CB	GLU	A	196	33.192	-6.461	-5.735	1.00 57.30	C
ATOM	3050	CG	GLU	A	196	32.048	-7.476	-5.923	1.00 59.93	C
ATOM	3053	CD	GLU	A	196	32.485	-8.961	-5.919	1.00 65.83	C
ATOM	3054	OE1	GLU	A	196	32.977	-9.443	-6.966	1.00 59.79	O
ATOM	3055	OE2	GLU	A	196	32.327	-9.670	-4.885	1.00 64.02	O
ATOM	3056	C	GLU	A	196	33.758	-3.977	-5.341	1.00 47.93	C
ATOM	3057	O	GLU	A	196	34.933	-4.143	-5.563	1.00 45.07	O
ATOM	3058	N	TRP	A	197	33.274	-2.911	-4.694	1.00 44.26	N
ATOM	3060	CA	TRP	A	197	34.115	-1.929	-4.021	1.00 39.52	C
ATOM	3062	CB	TRP	A	197	34.594	-0.730	-4.922	1.00 45.44	C
ATOM	3065	CG	TRP	A	197	33.660	0.246	-5.517	1.00 40.87	C
ATOM	3066	CD1	TRP	A	197	32.438	0.002	-5.994	1.00 49.82	C
ATOM	3068	NE1	TRP	A	197	31.860	1.157	-6.468	1.00 45.72	N
ATOM	3070	CE2	TRP	A	197	32.731	2.186	-6.302	1.00 42.13	C
ATOM	3071	CD2	TRP	A	197	33.885	1.649	-5.705	1.00 45.88	C
ATOM	3072	CE3	TRP	A	197	34.945	2.509	-5.427	1.00 46.01	C
ATOM	3074	CZ3	TRP	A	197	34.813	3.842	-5.746	1.00 47.92	C
ATOM	3076	CH2	TRP	A	197	33.651	4.330	-6.338	1.00 50.66	C
ATOM	3078	CZ2	TRP	A	197	32.600	3.515	-6.626	1.00 43.28	C
ATOM	3080	C	TRP	A	197	33.334	-1.576	-2.764	1.00 38.50	C
ATOM	3081	O	TRP	A	197	33.528	-2.184	-1.733	1.00 49.55	O
ATOM	3082	N	TYR	A	198	32.472	-0.599	-2.786	1.00 38.10	N
ATOM	3084	CA	TYR	A	198	31.466	-0.531	-1.734	1.00 37.22	C
ATOM	3086	CB	TYR	A	198	30.770	0.851	-1.643	1.00 35.77	C
ATOM	3089	CG	TYR	A	198	31.675	2.028	-1.405	1.00 36.02	C
ATOM	3090	CD1	TYR	A	198	31.813	2.562	-0.142	1.00 38.94	C
ATOM	3092	CE1	TYR	A	198	32.633	3.626	0.094	1.00 39.66	C
ATOM	3094	CZ	TYR	A	198	33.343	4.193	-0.948	1.00 44.31	C
ATOM	3095	OH	TYR	A	198	34.174	5.269	-0.701	1.00 46.07	O
ATOM	3097	CE2	TYR	A	198	33.225	3.681	-2.233	1.00 44.86	C
ATOM	3099	CD2	TYR	A	198	32.386	2.595	-2.448	1.00 42.57	C
ATOM	3101	C	TYR	A	198	30.433	-1.521	-2.214	1.00 33.99	C
ATOM	3102	O	TYR	A	198	30.574	-2.022	-3.287	1.00 30.84	O
ATOM	3103	N	TYR	A	199	29.405	-1.802	-1.418	1.00 38.45	N
ATOM	3105	CA	TYR	A	199	28.256	-2.557	-1.900	1.00 37.49	C
ATOM	3107	CB	TYR	A	199	27.490	-3.208	-0.728	1.00 36.73	C
ATOM	3110	CG	TYR	A	199	28.233	-4.329	-0.047	1.00 32.48	C
ATOM	3111	CD1	TYR	A	199	28.787	-4.165	1.205	1.00 33.92	C
ATOM	3113	CE1	TYR	A	199	29.453	-5.141	1.822	1.00 32.06	C
ATOM	3115	CZ	TYR	A	199	29.573	-6.299	1.193	1.00 32.26	C
ATOM	3116	OH	TYR	A	199	30.243	-7.369	1.769	1.00 34.61	O
ATOM	3118	CE2	TYR	A	199	29.024	-6.485	-0.047	1.00 33.09	C
ATOM	3120	CD2	TYR	A	199	28.372	-5.519	-0.644	1.00 33.21	C
ATOM	3122	C	TYR	A	199	27.368	-1.525	-2.645	1.00 42.41	C

ATOM	3123	O	TYR	A	199	26.418	-0.978	-2.075	1.00	45.22	O
ATOM	3124	N	GLU	A	200	27.702	-1.272	-3.910	1.00	43.18	N
ATOM	3126	CA	GLU	A	200	27.054	-0.284	-4.777	1.00	43.16	C
ATOM	3128	CB	GLU	A	200	28.089	0.193	-5.809	1.00	46.83	C
ATOM	3131	CG	GLU	A	200	27.626	1.383	-6.660	1.00	52.95	C
ATOM	3134	CD	GLU	A	200	28.337	1.543	-7.977	1.00	51.92	C
ATOM	3135	OE1	GLU	A	200	29.496	1.164	-8.085	1.00	56.62	O
ATOM	3136	OE2	GLU	A	200	27.715	2.055	-8.901	1.00	54.72	O
ATOM	3137	C	GLU	A	200	25.857	-0.816	-5.577	1.00	44.00	C
ATOM	3138	O	GLU	A	200	25.993	-1.789	-6.319	1.00	48.61	O
ATOM	3139	N	VAL	A	201	24.691	-0.193	-5.481	1.00	37.72	N
ATOM	3141	CA	VAL	A	201	23.583	-0.713	-6.250	1.00	38.06	C
ATOM	3143	CB	VAL	A	201	22.598	-1.332	-5.374	1.00	33.81	C
ATOM	3145	CG1	VAL	A	201	23.127	-2.629	-4.926	1.00	36.02	C
ATOM	3149	CG2	VAL	A	201	22.411	-0.506	-4.261	1.00	33.46	C
ATOM	3153	C	VAL	A	201	22.911	0.371	-7.006	1.00	36.84	C
ATOM	3154	O	VAL	A	201	23.235	1.474	-6.781	1.00	46.66	O
ATOM	3155	N	ILE	A	202	21.975	0.073	-7.877	1.00	41.86	N
ATOM	3157	CA	ILE	A	202	21.271	1.122	-8.619	1.00	45.62	C
ATOM	3159	CB	ILE	A	202	21.435	0.898	-9.997	1.00	47.37	C
ATOM	3161	CG1	ILE	A	202	22.924	0.945	-10.223	1.00	50.21	C
ATOM	3164	CD1	ILE	A	202	23.240	1.610	-11.515	1.00	50.75	C
ATOM	3168	CG2	ILE	A	202	20.619	2.021	-10.700	1.00	47.14	C
ATOM	3172	C	ILE	A	202	19.779	1.335	-8.517	1.00	46.10	C
ATOM	3173	O	ILE	A	202	19.001	0.401	-8.788	1.00	46.34	O
ATOM	3174	N	ILE	A	203	19.438	2.595	-8.195	1.00	44.21	N
ATOM	3176	CA	ILE	A	203	18.092	3.089	-7.882	1.00	41.01	C
ATOM	3178	CB	ILE	A	203	18.195	4.290	-6.931	1.00	42.75	C
ATOM	3180	CG1	ILE	A	203	18.885	3.856	-5.629	1.00	36.25	C
ATOM	3183	CD1	ILE	A	203	18.487	4.666	-4.472	1.00	37.62	C
ATOM	3187	CG2	ILE	A	203	16.754	4.972	-6.754	1.00	42.00	C
ATOM	3191	C	ILE	A	203	17.508	3.646	-9.096	1.00	43.71	C
ATOM	3192	O	ILE	A	203	18.164	4.384	-9.797	1.00	45.90	O
ATOM	3193	N	VAL	A	204	16.259	3.369	-9.374	1.00	43.96	N
ATOM	3195	CA	VAL	A	204	15.807	3.811	-10.662	1.00	43.46	C
ATOM	3197	CB	VAL	A	204	15.743	2.596	-11.563	1.00	47.55	C
ATOM	3199	CG1	VAL	A	204	17.031	1.774	-11.395	1.00	51.23	C
ATOM	3203	CG2	VAL	A	204	14.676	1.721	-11.133	1.00	52.39	C
ATOM	3207	C	VAL	A	204	14.525	4.610	-10.624	1.00	42.03	C
ATOM	3208	O	VAL	A	204	14.075	5.093	-11.639	1.00	46.48	O
ATOM	3209	N	ARG	A	205	13.944	4.739	-9.445	1.00	40.50	N
ATOM	3211	CA	ARG	A	205	12.755	5.532	-9.254	1.00	41.19	C
ATOM	3213	CB	ARG	A	205	11.567	4.685	-9.609	1.00	44.75	C
ATOM	3216	CG	ARG	A	205	10.235	5.385	-9.532	1.00	49.25	C
ATOM	3219	CD	ARG	A	205	9.191	4.670	-10.422	1.00	55.42	C
ATOM	3222	NE	ARG	A	205	7.775	4.754	-10.007	1.00	57.55	N
ATOM	3224	CZ	ARG	A	205	6.805	5.190	-10.797	1.00	56.49	C
ATOM	3225	NH1	ARG	A	205	7.092	5.604	-12.017	1.00	54.80	N
ATOM	3228	NH2	ARG	A	205	5.550	5.215	-10.377	1.00	61.53	N
ATOM	3231	C	ARG	A	205	12.674	5.953	-7.799	1.00	38.57	C
ATOM	3232	O	ARG	A	205	13.264	5.307	-7.003	1.00	40.72	O
ATOM	3233	N	VAL	A	206	11.961	7.032	-7.462	1.00	39.00	N
ATOM	3235	CA	VAL	A	206	11.709	7.408	-6.072	1.00	35.25	C
ATOM	3237	CB	VAL	A	206	12.689	8.391	-5.629	1.00	38.80	C
ATOM	3239	CG1	VAL	A	206	12.331	8.891	-4.228	1.00	40.25	C
ATOM	3243	CG2	VAL	A	206	14.073	7.800	-5.636	1.00	45.84	C
ATOM	3247	C	VAL	A	206	10.285	8.022	-5.864	1.00	41.79	C

ATOM	3248	O	VAL	A	206	9.881	9.004	-6.540	1.00 41.15	O
ATOM	3249	N	GLU	A	207	9.521	7.462	-4.919	1.00 43.20	N
ATOM	3251	CA	GLU	A	207	8.124	7.883	-4.684	1.00 39.16	C
ATOM	3253	CB	GLU	A	207	7.169	6.726	-4.872	1.00 41.81	C
ATOM	3256	CG	GLU	A	207	6.651	6.501	-6.293	1.00 42.92	C
ATOM	3259	CD	GLU	A	207	5.854	5.214	-6.417	1.00 41.92	C
ATOM	3260	OE1	GLU	A	207	5.320	4.691	-5.383	1.00 41.67	O
ATOM	3261	OE2	GLU	A	207	5.772	4.738	-7.560	1.00 41.81	O
ATOM	3262	C	GLU	A	207	7.891	8.349	-3.299	1.00 39.38	C
ATOM	3263	O	GLU	A	207	8.440	7.804	-2.362	1.00 40.98	O
ATOM	3264	N	ILE	A	208	7.056	9.361	-3.150	1.00 42.71	N
ATOM	3266	CA	ILE	A	208	6.682	9.842	-1.819	1.00 40.22	C
ATOM	3268	CB	ILE	A	208	7.109	11.296	-1.692	1.00 40.78	C
ATOM	3270	CG1	ILE	A	208	8.634	11.379	-1.893	1.00 42.36	C
ATOM	3273	CD1	ILE	A	208	9.464	11.215	-0.613	1.00 45.04	C
ATOM	3277	CG2	ILE	A	208	6.718	11.934	-0.350	1.00 42.70	C
ATOM	3281	C	ILE	A	208	5.189	9.584	-1.877	1.00 41.38	C
ATOM	3282	O	ILE	A	208	4.511	10.062	-2.777	1.00 48.60	O
ATOM	3283	N	ASN	A	209	4.672	8.792	-0.955	1.00 43.14	N
ATOM	3285	CA	ASN	A	209	3.297	8.295	-1.071	1.00 45.99	C
ATOM	3287	CB	ASN	A	209	2.273	9.238	-0.482	1.00 45.44	C
ATOM	3290	CG	ASN	A	209	2.294	9.251	1.014	1.00 50.98	C
ATOM	3291	OD1	ASN	A	209	3.237	8.778	1.628	1.00 61.21	O
ATOM	3292	ND2	ASN	A	209	1.253	9.813	1.619	1.00 50.57	N
ATOM	3295	C	ASN	A	209	2.848	8.010	-2.487	1.00 46.05	C
ATOM	3296	O	ASN	A	209	1.808	8.469	-2.879	1.00 48.81	O
ATOM	3297	N	GLY	A	210	3.626	7.269	-3.259	1.00 45.99	N
ATOM	3299	CA	GLY	A	210	3.168	6.840	-4.550	1.00 39.71	C
ATOM	3302	C	GLY	A	210	3.521	7.817	-5.634	1.00 44.70	C
ATOM	3303	O	GLY	A	210	3.523	7.484	-6.817	1.00 52.94	O
ATOM	3304	N	GLN	A	211	3.832	9.040	-5.259	1.00 48.14	N
ATOM	3306	CA	GLN	A	211	4.019	10.081	-6.260	1.00 48.41	C
ATOM	3308	CB	GLN	A	211	3.696	11.450	-5.650	1.00 47.90	C
ATOM	3311	CG	GLN	A	211	4.021	12.543	-6.672	1.00 51.74	C
ATOM	3314	CD	GLN	A	211	3.464	13.875	-6.326	1.00 48.04	C
ATOM	3315	OE1	GLN	A	211	2.904	14.051	-5.243	1.00 55.33	O
ATOM	3316	NE2	GLN	A	211	3.609	14.829	-7.242	1.00 43.28	N
ATOM	3319	C	GLN	A	211	5.442	10.132	-6.820	1.00 44.36	C
ATOM	3320	O	GLN	A	211	6.328	10.489	-6.090	1.00 40.60	O
ATOM	3321	N	ASP	A	212	5.638	9.788	-8.096	1.00 48.43	N
ATOM	3323	CA	ASP	A	212	6.964	9.822	-8.751	1.00 47.85	C
ATOM	3325	CB	ASP	A	212	6.864	9.644	-10.277	1.00 49.02	C
ATOM	3328	CG	ASP	A	212	8.224	9.660	-10.981	1.00 56.05	C
ATOM	3329	OD1	ASP	A	212	9.140	10.315	-10.471	1.00 65.69	O
ATOM	3330	OD2	ASP	A	212	8.493	9.068	-12.061	1.00 58.44	O
ATOM	3331	C	ASP	A	212	7.572	11.160	-8.472	1.00 46.75	C
ATOM	3332	O	ASP	A	212	6.936	12.160	-8.670	1.00 44.58	O
ATOM	3333	N	LEU	A	213	8.809	11.141	-7.994	1.00 49.84	N
ATOM	3335	CA	LEU	A	213	9.594	12.334	-7.729	1.00 49.00	C
ATOM	3337	CB	LEU	A	213	10.787	11.993	-6.864	1.00 42.74	C
ATOM	3340	CG	LEU	A	213	11.249	13.197	-6.091	1.00 38.09	C
ATOM	3342	CD1	LEU	A	213	10.262	13.552	-5.061	1.00 34.83	C
ATOM	3346	CD2	LEU	A	213	12.551	12.820	-5.448	1.00 44.89	C
ATOM	3350	C	LEU	A	213	10.102	12.901	-9.036	1.00 51.86	C
ATOM	3351	O	LEU	A	213	10.526	14.046	-9.102	1.00 60.24	O
ATOM	3352	N	LYS	A	214	10.103	12.091	-10.077	1.00 50.59	N
ATOM	3354	CA	LYS	A	214	10.268	12.667	-11.351	1.00 54.70	C

ATOM	3356	CB	LYS	A	214	9.120	13.673	-11.542	1.00	58.84	C
ATOM	3359	CG	LYS	A	214	8.713	13.941	-12.984	1.00	63.68	C
ATOM	3362	CD	LYS	A	214	7.904	12.796	-13.625	1.00	65.33	C
ATOM	3365	CE	LYS	A	214	8.338	12.533	-15.096	1.00	65.28	C
ATOM	3368	NZ	LYS	A	214	7.187	12.419	-16.076	1.00	59.61	N
ATOM	3372	C	LYS	A	214	11.567	13.392	-11.355	1.00	54.17	C
ATOM	3373	O	LYS	A	214	11.617	14.604	-11.251	1.00	59.68	O
ATOM	3374	N	MET	A	215	12.632	12.628	-11.413	1.00	56.61	N
ATOM	3376	CA	MET	A	215	13.932	13.165	-11.741	1.00	57.04	C
ATOM	3378	CB	MET	A	215	14.810	13.356	-10.511	1.00	57.19	C
ATOM	3381	CG	MET	A	215	14.273	14.458	-9.634	1.00	60.76	C
ATOM	3384	SD	MET	A	215	15.283	14.900	-8.238	1.00	63.39	S
ATOM	3385	CE	MET	A	215	16.644	15.670	-9.212	1.00	63.56	C
ATOM	3389	C	MET	A	215	14.534	12.189	-12.723	1.00	55.93	C
ATOM	3390	O	MET	A	215	14.070	11.083	-12.896	1.00	51.96	O
ATOM	3391	N	ASP	A	216	15.562	12.614	-13.410	1.00	58.57	N
ATOM	3393	CA	ASP	A	216	16.199	11.718	-14.331	1.00	62.39	C
ATOM	3395	CB	ASP	A	216	17.142	12.500	-15.225	1.00	64.34	C
ATOM	3398	CG	ASP	A	216	18.371	11.744	-15.547	1.00	62.34	C
ATOM	3399	OD1	ASP	A	216	18.562	10.659	-14.958	1.00	64.91	O
ATOM	3400	OD2	ASP	A	216	19.194	12.167	-16.384	1.00	69.70	O
ATOM	3401	C	ASP	A	216	16.917	10.736	-13.424	1.00	63.11	C
ATOM	3402	O	ASP	A	216	17.563	11.142	-12.458	1.00	62.81	O
ATOM	3403	N	CYS	A	217	16.824	9.446	-13.708	1.00	64.18	N
ATOM	3405	CA	CYS	A	217	17.358	8.520	-12.735	1.00	66.46	C
ATOM	3407	CB	CYS	A	217	17.022	7.056	-13.051	1.00	66.11	C
ATOM	3410	SG	CYS	A	217	17.799	6.334	-14.479	1.00	72.28	S
ATOM	3411	C	CYS	A	217	18.822	8.755	-12.482	1.00	65.55	C
ATOM	3412	O	CYS	A	217	19.283	8.527	-11.381	1.00	69.85	O
ATOM	3413	N	LYS	A	218	19.547	9.255	-13.474	1.00	68.81	N
ATOM	3415	CA	LYS	A	218	20.992	9.436	-13.327	1.00	70.13	C
ATOM	3417	CB	LYS	A	218	21.618	10.160	-14.554	1.00	73.78	C
ATOM	3420	CG	LYS	A	218	22.335	9.229	-15.609	1.00	76.00	C
ATOM	3423	CD	LYS	A	218	23.033	9.987	-16.810	1.00	74.40	C
ATOM	3426	CE	LYS	A	218	23.953	9.050	-17.717	1.00	75.92	C
ATOM	3429	NZ	LYS	A	218	23.299	7.995	-18.636	1.00	68.28	N
ATOM	3433	C	LYS	A	218	21.288	10.204	-12.055	1.00	66.58	C
ATOM	3434	O	LYS	A	218	22.340	10.059	-11.456	1.00	68.40	O
ATOM	3435	N	GLU	A	219	20.347	11.014	-11.621	1.00	61.73	N
ATOM	3437	CA	GLU	A	219	20.604	11.871	-10.482	1.00	61.25	C
ATOM	3439	CB	GLU	A	219	19.634	13.041	-10.528	1.00	60.32	C
ATOM	3442	CG	GLU	A	219	19.746	13.887	-11.782	1.00	65.08	C
ATOM	3445	CD	GLU	A	219	20.977	14.781	-11.827	1.00	65.35	C
ATOM	3446	OE1	GLU	A	219	21.905	14.598	-10.998	1.00	62.03	O
ATOM	3447	OE2	GLU	A	219	21.001	15.673	-12.717	1.00	68.30	O
ATOM	3448	C	GLU	A	219	20.493	11.211	-9.113	1.00	60.55	C
ATOM	3449	O	GLU	A	219	20.976	11.755	-8.113	1.00	60.04	O
ATOM	3450	N	TYR	A	220	19.848	10.055	-9.051	1.00	58.43	N
ATOM	3452	CA	TYR	A	220	19.599	9.427	-7.771	1.00	54.98	C
ATOM	3454	CB	TYR	A	220	18.533	8.374	-7.903	1.00	56.27	C
ATOM	3457	CG	TYR	A	220	17.175	8.915	-8.250	1.00	51.16	C
ATOM	3458	CD1	TYR	A	220	16.460	8.385	-9.284	1.00	47.88	C
ATOM	3460	CE1	TYR	A	220	15.232	8.859	-9.601	1.00	53.59	C
ATOM	3462	CZ	TYR	A	220	14.696	9.898	-8.866	1.00	54.76	C
ATOM	3463	OH	TYR	A	220	13.443	10.384	-9.181	1.00	59.59	O
ATOM	3465	CE2	TYR	A	220	15.390	10.431	-7.834	1.00	45.89	C
ATOM	3467	CD2	TYR	A	220	16.619	9.943	-7.529	1.00	48.33	C

ATOM	3469	C	TYR	A	220	20.844	8.778	-7.324	1.00	55.05	C
ATOM	3470	O	TYR	A	220	21.101	8.684	-6.135	1.00	58.11	O
ATOM	3471	N	ASN	A	221	21.616	8.340	-8.310	1.00	56.80	N
ATOM	3473	CA	ASN	A	221	22.886	7.658	-8.110	1.00	56.10	C
ATOM	3475	CB	ASN	A	221	22.874	6.380	-8.928	1.00	51.38	C
ATOM	3478	CG	ASN	A	221	21.838	5.430	-8.435	1.00	54.95	C
ATOM	3479	OD1	ASN	A	221	21.923	4.970	-7.294	1.00	53.01	O
ATOM	3480	ND2	ASN	A	221	20.830	5.136	-9.272	1.00	50.76	N
ATOM	3483	C	ASN	A	221	24.068	8.511	-8.521	1.00	59.72	C
ATOM	3484	O	ASN	A	221	25.123	7.989	-8.925	1.00	63.63	O
ATOM	3485	N	TYR	A	222	23.909	9.823	-8.393	1.00	63.40	N
ATOM	3487	CA	TYR	A	222	24.919	10.707	-8.917	1.00	63.06	C
ATOM	3489	CB	TYR	A	222	24.506	12.178	-9.007	1.00	68.66	C
ATOM	3492	CG	TYR	A	222	25.696	13.048	-9.334	1.00	67.88	C
ATOM	3493	CD1	TYR	A	222	26.577	12.678	-10.333	1.00	72.26	C
ATOM	3495	CE1	TYR	A	222	27.666	13.446	-10.632	1.00	77.81	C
ATOM	3497	CZ	TYR	A	222	27.889	14.606	-9.925	1.00	79.75	C
ATOM	3498	OH	TYR	A	222	28.992	15.374	-10.239	1.00	83.62	O
ATOM	3500	CE2	TYR	A	222	27.018	14.993	-8.917	1.00	75.27	C
ATOM	3502	CD2	TYR	A	222	25.942	14.216	-8.632	1.00	69.85	C
ATOM	3504	C	TYR	A	222	26.139	10.534	-8.091	1.00	61.93	C
ATOM	3505	O	TYR	A	222	26.223	10.993	-6.934	1.00	51.08	O
ATOM	3506	N	ASP	A	223	27.055	9.829	-8.771	1.00	65.98	N
ATOM	3508	CA	ASP	A	223	28.389	9.416	-8.349	1.00	58.22	C
ATOM	3510	CB	ASP	A	223	29.017	10.429	-7.382	1.00	58.25	C
ATOM	3513	CG	ASP	A	223	29.709	9.795	-6.239	1.00	64.15	C
ATOM	3514	OD1	ASP	A	223	28.983	9.249	-5.377	1.00	75.60	O
ATOM	3515	OD2	ASP	A	223	30.956	9.791	-6.110	1.00	56.47	O
ATOM	3516	C	ASP	A	223	28.238	7.959	-7.885	1.00	56.27	C
ATOM	3517	O	ASP	A	223	28.790	7.052	-8.514	1.00	48.60	O
ATOM	3518	N	LYS	A	224	27.463	7.710	-6.829	1.00	60.43	N
ATOM	3520	CA	LYS	A	224	27.203	6.317	-6.389	1.00	58.39	C
ATOM	3522	CB	LYS	A	224	28.440	5.692	-5.784	1.00	55.03	C
ATOM	3525	CG	LYS	A	224	28.722	6.175	-4.403	1.00	53.98	C
ATOM	3528	CD	LYS	A	224	30.039	5.591	-3.910	1.00	51.13	C
ATOM	3531	CE	LYS	A	224	30.576	6.430	-2.777	1.00	50.78	C
ATOM	3534	NZ	LYS	A	224	30.830	7.806	-3.279	1.00	52.27	N
ATOM	3538	C	LYS	A	224	26.093	6.132	-5.382	1.00	57.12	C
ATOM	3539	O	LYS	A	224	25.621	7.085	-4.735	1.00	59.55	O
ATOM	3540	N	SER	A	225	25.697	4.870	-5.246	1.00	56.45	N
ATOM	3542	CA	SER	A	225	24.636	4.461	-4.316	1.00	52.86	C
ATOM	3544	CB	SER	A	225	23.338	4.274	-5.076	1.00	50.03	C
ATOM	3547	OG	SER	A	225	22.661	5.516	-5.099	1.00	52.69	O
ATOM	3549	C	SER	A	225	25.040	3.197	-3.570	1.00	48.24	C
ATOM	3550	O	SER	A	225	25.422	2.202	-4.180	1.00	48.80	O
ATOM	3551	N	ILE	A	226	24.969	3.241	-2.244	1.00	44.93	N
ATOM	3553	CA	ILE	A	226	25.441	2.125	-1.454	1.00	37.58	C
ATOM	3555	CB	ILE	A	226	26.875	2.379	-1.017	1.00	39.22	C
ATOM	3557	CG1	ILE	A	226	26.923	3.507	-0.005	1.00	37.98	C
ATOM	3560	CD1	ILE	A	226	28.301	3.756	0.555	1.00	34.23	C
ATOM	3564	CG2	ILE	A	226	27.756	2.690	-2.212	1.00	38.02	C
ATOM	3568	C	ILE	A	226	24.632	1.817	-0.239	1.00	38.95	C
ATOM	3569	O	ILE	A	226	23.774	2.567	0.185	1.00	47.23	O
ATOM	3570	N	VAL	A	227	24.920	0.635	0.310	1.00	40.07	N
ATOM	3572	CA	VAL	A	227	24.282	0.137	1.528	1.00	39.95	C
ATOM	3574	CB	VAL	A	227	23.835	-1.340	1.378	1.00	36.39	C
ATOM	3576	CG1	VAL	A	227	23.223	-1.863	2.677	1.00	42.20	C

ATOM	3580	CG2	VAL	A	227	22.852	-1.446	0.279	1.00 32.66	C
ATOM	3584	C	VAL	A	227	25.298	0.175	2.644	1.00 41.52	C
ATOM	3585	O	VAL	A	227	26.400	-0.407	2.485	1.00 31.57	O
ATOM	3586	N	ASP	A	228	24.951	0.813	3.768	1.00 42.83	N
ATOM	3588	CA	ASP	A	228	25.934	0.901	4.892	1.00 44.00	C
ATOM	3590	CB	ASP	A	228	26.926	2.001	4.665	1.00 47.22	C
ATOM	3593	CG	ASP	A	228	27.484	2.542	5.943	1.00 55.34	C
ATOM	3594	OD1	ASP	A	228	27.322	1.886	6.990	1.00 60.37	O
ATOM	3595	OD2	ASP	A	228	28.093	3.631	6.003	1.00 65.03	O
ATOM	3596	C	ASP	A	228	25.364	1.037	6.287	1.00 43.99	C
ATOM	3597	O	ASP	A	228	24.829	2.037	6.705	1.00 43.43	O
ATOM	3598	N	SER	A	229	25.535	-0.057	6.977	1.00 45.99	N
ATOM	3600	CA	SER	A	229	25.113	-0.268	8.307	1.00 43.77	C
ATOM	3602	CB	SER	A	229	25.400	-1.715	8.589	1.00 43.80	C
ATOM	3605	OG	SER	A	229	26.786	-1.836	8.462	1.00 43.49	O
ATOM	3607	C	SER	A	229	25.987	0.478	9.228	1.00 39.36	C
ATOM	3608	O	SER	A	229	25.806	0.377	10.394	1.00 35.35	O
ATOM	3609	N	GLY	A	230	26.982	1.181	8.705	1.00 40.62	N
ATOM	3611	CA	GLY	A	230	27.805	2.105	9.509	1.00 37.16	C
ATOM	3614	C	GLY	A	230	27.388	3.543	9.319	1.00 38.50	C
ATOM	3615	O	GLY	A	230	28.040	4.500	9.740	1.00 38.84	O
ATOM	3616	N	THR	A	231	26.265	3.690	8.657	1.00 36.83	N
ATOM	3618	CA	THR	A	231	25.672	4.981	8.477	1.00 36.29	C
ATOM	3620	CB	THR	A	231	25.795	5.339	7.037	1.00 36.20	C
ATOM	3622	OG1	THR	A	231	27.141	5.728	6.829	1.00 32.63	O
ATOM	3624	CG2	THR	A	231	24.980	6.570	6.709	1.00 33.65	C
ATOM	3628	C	THR	A	231	24.231	4.977	8.968	1.00 36.96	C
ATOM	3629	O	THR	A	231	23.479	4.036	8.702	1.00 36.51	O
ATOM	3630	N	THR	A	232	23.868	6.048	9.672	1.00 39.63	N
ATOM	3632	CA	THR	A	232	22.586	6.197	10.378	1.00 44.48	C
ATOM	3634	CB	THR	A	232	22.776	7.362	11.370	1.00 47.87	C
ATOM	3636	OG1	THR	A	232	23.819	7.053	12.305	1.00 58.32	O
ATOM	3638	CG2	THR	A	232	21.553	7.610	12.240	1.00 52.16	C
ATOM	3642	C	THR	A	232	21.384	6.554	9.507	1.00 46.65	C
ATOM	3643	O	THR	A	232	20.315	5.954	9.593	1.00 48.65	O
ATOM	3644	N	ASN	A	233	21.590	7.547	8.663	1.00 47.89	N
ATOM	3646	CA	ASN	A	233	20.523	8.231	7.983	1.00 47.43	C
ATOM	3648	CB	ASN	A	233	20.878	9.715	7.971	1.00 48.12	C
ATOM	3651	CG	ASN	A	233	20.435	10.435	9.198	1.00 43.02	C
ATOM	3652	OD1	ASN	A	233	20.365	9.883	10.276	1.00 38.96	O
ATOM	3653	ND2	ASN	A	233	20.145	11.703	9.035	1.00 50.70	N
ATOM	3656	C	ASN	A	233	20.451	7.803	6.572	1.00 48.67	C
ATOM	3657	O	ASN	A	233	21.360	7.093	6.131	1.00 51.81	O
ATOM	3658	N	LEU	A	234	19.403	8.234	5.856	1.00 45.12	N
ATOM	3660	CA	LEU	A	234	19.333	7.999	4.413	1.00 46.15	C
ATOM	3662	CB	LEU	A	234	17.912	7.787	3.895	1.00 46.39	C
ATOM	3665	CG	LEU	A	234	17.655	7.385	2.424	1.00 46.15	C
ATOM	3667	CD1	LEU	A	234	16.562	8.293	1.862	1.00 47.55	C
ATOM	3671	CD2	LEU	A	234	18.868	7.415	1.522	1.00 47.77	C
ATOM	3675	C	LEU	A	234	19.842	9.286	3.867	1.00 45.80	C
ATOM	3676	O	LEU	A	234	19.245	10.301	4.146	1.00 51.40	O
ATOM	3677	N	ARG	A	235	20.940	9.231	3.104	1.00 47.98	N
ATOM	3679	CA	ARG	A	235	21.555	10.393	2.452	1.00 41.53	C
ATOM	3681	CB	ARG	A	235	23.058	10.339	2.514	1.00 40.87	C
ATOM	3684	CG	ARG	A	235	23.653	9.849	3.761	1.00 41.40	C
ATOM	3687	CD	ARG	A	235	23.645	10.825	4.775	1.00 46.10	C
ATOM	3690	NE	ARG	A	235	24.981	11.103	5.305	1.00 52.10	N

ATOM	3692	CZ	ARG A 235	25.469	12.342	5.380	1.00	54.49		C
ATOM	3693	NH1	ARG A 235	26.649	12.577	5.870	1.00	51.49		N
ATOM	3696	NH2	ARG A 235	24.751	13.366	4.949	1.00	62.47		N
ATOM	3699	C	ARG A 235	21.284	10.362	0.984	1.00	42.47		C
ATOM	3700	O	ARG A 235	21.322	9.234	0.354	1.00	35.71		O
ATOM	3701	N	LEU A 236	21.054	11.575	0.446	1.00	42.38		N
ATOM	3703	CA	LEU A 236	20.755	11.710	-0.959	1.00	44.15		C
ATOM	3705	CB	LEU A 236	19.287	12.033	-1.112	1.00	46.30		C
ATOM	3708	CG	LEU A 236	18.420	11.070	-0.325	1.00	46.08		C
ATOM	3710	CD1	LEU A 236	17.143	11.742	0.192	1.00	50.37		C
ATOM	3714	CD2	LEU A 236	18.143	9.851	-1.201	1.00	46.39		C
ATOM	3718	C	LEU A 236	21.574	12.774	-1.606	1.00	46.18		C
ATOM	3719	O	LEU A 236	21.974	13.760	-1.003	1.00	56.50		O
ATOM	3720	N	PRO A 237	21.861	12.556	-2.850	1.00	43.50		N
ATOM	3721	CA	PRO A 237	22.474	13.586	-3.669	1.00	48.09		C
ATOM	3723	CB	PRO A 237	22.378	13.003	-5.075	1.00	50.44		C
ATOM	3726	CG	PRO A 237	22.263	11.517	-4.873	1.00	47.91		C
ATOM	3729	CD	PRO A 237	21.677	11.287	-3.541	1.00	43.62		C
ATOM	3732	C	PRO A 237	21.657	14.854	-3.533	1.00	47.59		C
ATOM	3733	O	PRO A 237	20.443	14.793	-3.621	1.00	56.42		O
ATOM	3734	N	LYS A 238	22.324	15.977	-3.340	1.00	54.44		N
ATOM	3736	CA	LYS A 238	21.710	17.262	-2.966	1.00	59.43		C
ATOM	3738	CB	LYS A 238	22.759	18.345	-3.006	1.00	65.19		C
ATOM	3741	CG	LYS A 238	22.458	19.459	-2.056	1.00	68.51		C
ATOM	3744	CD	LYS A 238	21.616	20.524	-2.702	1.00	69.31		C
ATOM	3747	CE	LYS A 238	21.206	21.491	-1.626	1.00	74.63		C
ATOM	3750	NZ	LYS A 238	21.148	20.760	-0.296	1.00	72.38		N
ATOM	3754	C	LYS A 238	20.530	17.740	-3.770	1.00	60.04		C
ATOM	3755	O	LYS A 238	19.535	18.188	-3.218	1.00	62.70		O
ATOM	3756	N	LYS A 239	20.645	17.681	-5.078	1.00	61.99		N
ATOM	3758	CA	LYS A 239	19.502	17.942	-5.889	1.00	62.06		C
ATOM	3760	CB	LYS A 239	19.803	17.627	-7.373	1.00	65.93		C
ATOM	3763	CG	LYS A 239	19.794	18.830	-8.411	1.00	69.24		C
ATOM	3766	CD	LYS A 239	21.071	18.808	-9.350	1.00	71.82		C
ATOM	3769	CE	LYS A 239	20.782	18.915	-10.877	1.00	73.55		C
ATOM	3772	NZ	LYS A 239	21.914	18.411	-11.760	1.00	70.78		N
ATOM	3776	C	LYS A 239	18.444	16.999	-5.285	1.00	64.24		C
ATOM	3777	O	LYS A 239	17.406	17.455	-4.781	1.00	68.73		O
ATOM	3778	N	VAL A 240	18.705	15.691	-5.278	1.00	58.91		N
ATOM	3780	CA	VAL A 240	17.635	14.751	-4.914	1.00	62.19		C
ATOM	3782	CB	VAL A 240	18.084	13.284	-4.909	1.00	65.97		C
ATOM	3784	CG1	VAL A 240	16.867	12.392	-4.847	1.00	66.12		C
ATOM	3788	CG2	VAL A 240	18.913	12.947	-6.147	1.00	68.39		C
ATOM	3792	C	VAL A 240	17.034	15.079	-3.556	1.00	58.68		C
ATOM	3793	O	VAL A 240	15.811	15.151	-3.379	1.00	54.40		O
ATOM	3794	N	PHE A 241	17.906	15.282	-2.587	1.00	56.41		N
ATOM	3796	CA	PHE A 241	17.445	15.677	-1.278	1.00	52.63		C
ATOM	3798	CB	PHE A 241	18.635	15.966	-0.376	1.00	50.48		C
ATOM	3801	CG	PHE A 241	18.276	16.566	0.957	1.00	50.54		C
ATOM	3802	CD1	PHE A 241	17.615	15.854	1.945	1.00	53.71		C
ATOM	3804	CE1	PHE A 241	17.303	16.447	3.181	1.00	54.61		C
ATOM	3806	CZ	PHE A 241	17.662	17.775	3.427	1.00	55.24		C
ATOM	3808	CE2	PHE A 241	18.322	18.488	2.440	1.00	55.17		C
ATOM	3810	CD2	PHE A 241	18.624	17.870	1.219	1.00	57.01		C
ATOM	3812	C	PHE A 241	16.561	16.885	-1.477	1.00	51.84		C
ATOM	3813	O	PHE A 241	15.439	16.937	-0.971	1.00	47.71		O
ATOM	3814	N	GLU A 242	17.031	17.857	-2.245	1.00	53.89		N

ATOM	3816	CA	GLU	A	242	16.239	19.085	-2.353	1.00	56.53	C
ATOM	3818	CB	GLU	A	242	16.797	20.110	-3.362	1.00	59.79	C
ATOM	3821	CG	GLU	A	242	17.432	21.353	-2.697	1.00	66.19	C
ATOM	3824	CD	GLU	A	242	17.130	21.454	-1.185	1.00	74.63	C
ATOM	3825	OE1	GLU	A	242	15.931	21.492	-0.789	1.00	79.35	O
ATOM	3826	OE2	GLU	A	242	18.091	21.487	-0.372	1.00	76.40	O
ATOM	3827	C	GLU	A	242	14.790	18.768	-2.638	1.00	53.63	C
ATOM	3828	O	GLU	A	242	13.937	19.203	-1.880	1.00	45.24	O
ATOM	3829	N	ALA	A	243	14.536	17.997	-3.709	1.00	52.72	N
ATOM	3831	CA	ALA	A	243	13.180	17.599	-4.140	1.00	50.49	C
ATOM	3833	CB	ALA	A	243	13.258	16.838	-5.428	1.00	51.48	C
ATOM	3837	C	ALA	A	243	12.383	16.781	-3.120	1.00	51.02	C
ATOM	3838	O	ALA	A	243	11.259	17.157	-2.763	1.00	54.64	O
ATOM	3839	N	ALA	A	244	12.949	15.670	-2.653	1.00	46.51	N
ATOM	3841	CA	ALA	A	244	12.262	14.833	-1.670	1.00	41.75	C
ATOM	3843	CB	ALA	A	244	13.173	13.694	-1.156	1.00	37.69	C
ATOM	3847	C	ALA	A	244	11.792	15.630	-0.490	1.00	44.76	C
ATOM	3848	O	ALA	A	244	10.658	15.496	-0.084	1.00	47.71	O
ATOM	3849	N	VAL	A	245	12.646	16.470	0.083	1.00	52.14	N
ATOM	3851	CA	VAL	A	245	12.279	17.094	1.348	1.00	53.69	C
ATOM	3853	CB	VAL	A	245	13.325	18.100	1.854	1.00	53.93	C
ATOM	3855	CG1	VAL	A	245	12.824	18.785	3.121	1.00	53.73	C
ATOM	3859	CG2	VAL	A	245	14.659	17.433	2.106	1.00	58.55	C
ATOM	3863	C	VAL	A	245	10.976	17.810	1.141	1.00	52.68	C
ATOM	3864	O	VAL	A	245	10.072	17.775	1.976	1.00	57.49	O
ATOM	3865	N	LYS	A	246	10.904	18.444	-0.015	1.00	49.32	N
ATOM	3867	CA	LYS	A	246	9.816	19.327	-0.367	1.00	54.20	C
ATOM	3869	CB	LYS	A	246	10.200	19.988	-1.684	1.00	58.55	C
ATOM	3872	CG	LYS	A	246	11.763	19.868	-1.943	1.00	63.23	C
ATOM	3875	CD	LYS	A	246	12.640	21.041	-1.337	1.00	70.71	C
ATOM	3878	CE	LYS	A	246	13.228	20.765	0.055	1.00	70.11	C
ATOM	3881	NZ	LYS	A	246	13.337	22.015	0.860	1.00	70.79	N
ATOM	3885	C	LYS	A	246	8.550	18.497	-0.458	1.00	56.50	C
ATOM	3886	O	LYS	A	246	7.635	18.653	0.345	1.00	62.61	O
ATOM	3887	N	SER	A	247	8.510	17.574	-1.417	1.00	53.80	N
ATOM	3889	CA	SER	A	247	7.381	16.674	-1.534	1.00	45.07	C
ATOM	3891	CB	SER	A	247	7.699	15.537	-2.496	1.00	45.02	C
ATOM	3894	OG	SER	A	247	6.636	14.587	-2.462	1.00	43.14	O
ATOM	3896	C	SER	A	247	7.010	16.123	-0.162	1.00	38.07	C
ATOM	3897	O	SER	A	247	5.842	15.925	0.137	1.00	47.02	O
ATOM	3898	N	ILE	A	248	8.008	15.906	0.685	1.00	35.51	N
ATOM	3900	CA	ILE	A	248	7.738	15.379	2.012	1.00	44.04	C
ATOM	3902	CB	ILE	A	248	9.068	14.787	2.672	1.00	45.65	C
ATOM	3904	CG1	ILE	A	248	9.363	13.394	2.080	1.00	38.16	C
ATOM	3907	CD1	ILE	A	248	10.760	12.863	2.337	1.00	33.98	C
ATOM	3911	CG2	ILE	A	248	8.970	14.588	4.187	1.00	46.92	C
ATOM	3915	C	ILE	A	248	6.955	16.401	2.846	1.00	51.15	C
ATOM	3916	O	ILE	A	248	6.052	16.024	3.606	1.00	56.50	O
ATOM	3917	N	LYS	A	249	7.281	17.689	2.671	1.00	53.92	N
ATOM	3919	CA	LYS	A	249	6.627	18.796	3.389	1.00	54.59	C
ATOM	3921	CB	LYS	A	249	7.303	20.147	3.071	1.00	58.74	C
ATOM	3924	CG	LYS	A	249	8.585	20.554	3.850	1.00	58.89	C
ATOM	3927	CD	LYS	A	249	9.099	21.880	3.249	1.00	58.57	C
ATOM	3930	CE	LYS	A	249	10.483	22.330	3.774	1.00	61.39	C
ATOM	3933	NZ	LYS	A	249	11.350	22.849	2.647	1.00	57.83	N
ATOM	3937	C	LYS	A	249	5.177	18.935	2.964	1.00	54.92	C
ATOM	3938	O	LYS	A	249	4.246	18.932	3.790	1.00	54.00	O

ATOM	3939	N	ALA	A	250	5.003	19.083	1.656	1.00 49.70	N
ATOM	3941	CA	ALA	A	250	3.688	19.218	1.060	1.00 52.00	C
ATOM	3943	CB	ALA	A	250	3.786	19.096	-0.465	1.00 53.40	C
ATOM	3947	C	ALA	A	250	2.773	18.163	1.636	1.00 53.09	C
ATOM	3948	O	ALA	A	250	1.602	18.407	1.922	1.00 60.66	O
ATOM	3949	N	ALA	A	251	3.344	16.980	1.805	1.00 57.05	N
ATOM	3951	CA	ALA	A	251	2.639	15.818	2.338	1.00 55.70	C
ATOM	3953	CB	ALA	A	251	3.420	14.558	1.986	1.00 53.52	C
ATOM	3957	C	ALA	A	251	2.404	15.877	3.856	1.00 58.05	C
ATOM	3958	O	ALA	A	251	1.461	15.323	4.372	1.00 62.89	O
ATOM	3959	N	SER	A	252	3.281	16.529	4.590	1.00 59.77	N
ATOM	3961	CA	SER	A	252	3.147	16.572	6.034	1.00 56.96	C
ATOM	3963	CB	SER	A	252	4.562	16.585	6.606	1.00 59.16	C
ATOM	3966	OG	SER	A	252	5.524	16.922	5.592	1.00 58.00	O
ATOM	3968	C	SER	A	252	2.413	17.837	6.419	1.00 56.47	C
ATOM	3969	O	SER	A	252	2.110	18.098	7.575	1.00 51.08	O
ATOM	3970	N	SER	A	253	2.089	18.610	5.401	1.00 59.91	N
ATOM	3972	CA	SER	A	253	1.690	20.003	5.568	1.00 59.18	C
ATOM	3974	CB	SER	A	253	1.581	20.643	4.173	1.00 57.63	C
ATOM	3977	OG	SER	A	253	1.316	22.026	4.257	1.00 55.74	O
ATOM	3979	C	SER	A	253	0.484	20.373	6.441	1.00 60.11	C
ATOM	3980	O	SER	A	253	0.075	21.526	6.428	1.00 59.14	O
ATOM	3981	N	THR	A	254	-0.099	19.451	7.200	1.00 60.35	N
ATOM	3983	CA	THR	A	254	-1.147	19.897	8.117	1.00 60.80	C
ATOM	3985	CB	THR	A	254	-2.318	18.951	8.293	1.00 60.71	C
ATOM	3987	OG1	THR	A	254	-1.905	17.797	9.043	1.00 56.78	O
ATOM	3989	CG2	THR	A	254	-2.858	18.465	6.955	1.00 60.72	C
ATOM	3993	C	THR	A	254	-0.473	20.059	9.435	1.00 64.58	C
ATOM	3994	O	THR	A	254	-1.121	20.164	10.478	1.00 68.02	O
ATOM	3995	N	GLU	A	255	0.848	20.043	9.385	1.00 66.30	N
ATOM	3997	CA	GLU	A	255	1.626	20.400	10.537	1.00 69.56	C
ATOM	3999	CB	GLU	A	255	1.998	19.192	11.398	1.00 70.30	C
ATOM	4002	CG	GLU	A	255	0.804	18.717	12.245	1.00 70.88	C
ATOM	4005	CD	GLU	A	255	1.164	18.170	13.624	1.00 72.29	C
ATOM	4006	OE1	GLU	A	255	2.307	18.397	14.115	1.00 79.50	O
ATOM	4007	OE2	GLU	A	255	0.285	17.519	14.229	1.00 62.93	O
ATOM	4008	C	GLU	A	255	2.810	21.164	10.000	1.00 72.57	C
ATOM	4009	O	GLU	A	255	3.248	20.966	8.852	1.00 74.27	O
ATOM	4010	N	LYS	A	256	3.298	22.083	10.818	1.00 72.10	N
ATOM	4012	CA	LYS	A	256	4.408	22.901	10.411	1.00 68.65	C
ATOM	4014	CB	LYS	A	256	4.017	24.356	10.254	1.00 69.61	C
ATOM	4017	CG	LYS	A	256	3.138	24.580	9.037	1.00 76.54	C
ATOM	4020	CD	LYS	A	256	3.813	24.086	7.737	1.00 79.94	C
ATOM	4023	CE	LYS	A	256	3.261	24.791	6.471	1.00 79.27	C
ATOM	4026	NZ	LYS	A	256	2.321	23.945	5.676	1.00 79.72	N
ATOM	4030	C	LYS	A	256	5.429	22.704	11.462	1.00 64.96	C
ATOM	4031	O	LYS	A	256	5.097	22.569	12.658	1.00 51.53	O
ATOM	4032	N	PHE	A	257	6.664	22.674	10.972	1.00 61.73	N
ATOM	4034	CA	PHE	A	257	7.826	22.397	11.762	1.00 60.99	C
ATOM	4036	CB	PHE	A	257	8.370	21.026	11.354	1.00 65.88	C
ATOM	4039	CG	PHE	A	257	7.338	19.922	11.397	1.00 67.36	C
ATOM	4040	CD1	PHE	A	257	6.875	19.347	10.232	1.00 71.73	C
ATOM	4042	CE1	PHE	A	257	5.931	18.341	10.278	1.00 72.34	C
ATOM	4044	CZ	PHE	A	257	5.447	17.903	11.503	1.00 71.58	C
ATOM	4046	CE2	PHE	A	257	5.910	18.476	12.667	1.00 68.20	C
ATOM	4048	CD2	PHE	A	257	6.840	19.469	12.611	1.00 66.34	C
ATOM	4050	C	PHE	A	257	8.811	23.466	11.392	1.00 59.35	C

ATOM	4051	O	PHE A 257	8.716	24.049	10.333	1.00	58.22		O
ATOM	4052	N	PRO A 258	9.766	23.724	12.257	1.00	61.91		N
ATOM	4053	CA	PRO A 258	10.792	24.731	11.983	1.00	65.38		C
ATOM	4055	CB	PRO A 258	11.351	25.053	13.358	1.00	66.17		C
ATOM	4058	CG	PRO A 258	10.803	23.979	14.309	1.00	64.85		C
ATOM	4061	CD	PRO A 258	9.949	23.054	13.546	1.00	61.29		C
ATOM	4064	C	PRO A 258	11.875	24.094	11.144	1.00	69.63		C
ATOM	4065	O	PRO A 258	12.156	22.912	11.335	1.00	67.19		O
ATOM	4066	N	ASP A 259	12.485	24.858	10.248	1.00	74.52		N
ATOM	4068	CA	ASP A 259	13.450	24.293	9.308	1.00	76.21		C
ATOM	4070	CB	ASP A 259	14.038	25.411	8.459	1.00	78.78		C
ATOM	4073	CG	ASP A 259	12.952	26.362	7.934	1.00	85.56		C
ATOM	4074	OD1	ASP A 259	12.355	26.110	6.853	1.00	85.56		O
ATOM	4075	OD2	ASP A 259	12.604	27.384	8.566	1.00	94.62		O
ATOM	4076	C	ASP A 259	14.514	23.433	10.009	1.00	75.34		C
ATOM	4077	O	ASP A 259	14.811	22.315	9.560	1.00	77.54		O
ATOM	4078	N	GLY A 260	15.056	23.927	11.119	1.00	68.42		N
ATOM	4080	CA	GLY A 260	16.038	23.173	11.867	1.00	65.64		C
ATOM	4083	C	GLY A 260	15.782	21.681	11.757	1.00	64.85		C
ATOM	4084	O	GLY A 260	16.705	20.864	11.545	1.00	65.50		O
ATOM	4085	N	PHE A 261	14.512	21.331	11.912	1.00	62.03		N
ATOM	4087	CA	PHE A 261	14.039	19.953	11.778	1.00	60.14		C
ATOM	4089	CB	PHE A 261	12.545	19.893	12.146	1.00	59.84		C
ATOM	4092	CG	PHE A 261	11.901	18.542	11.976	1.00	53.88		C
ATOM	4093	CD1	PHE A 261	12.040	17.584	12.931	1.00	50.78		C
ATOM	4095	CE1	PHE A 261	11.450	16.369	12.790	1.00	51.53		C
ATOM	4097	CZ	PHE A 261	10.699	16.096	11.676	1.00	55.50		C
ATOM	4099	CE2	PHE A 261	10.542	17.043	10.705	1.00	51.48		C
ATOM	4101	CD2	PHE A 261	11.140	18.260	10.859	1.00	55.00		C
ATOM	4103	C	PHE A 261	14.271	19.432	10.364	1.00	60.30		C
ATOM	4104	O	PHE A 261	14.921	18.396	10.165	1.00	62.84		O
ATOM	4105	N	TRP A 262	13.778	20.132	9.363	1.00	52.97		N
ATOM	4107	CA	TRP A 262	13.930	19.551	8.071	1.00	54.85		C
ATOM	4109	CB	TRP A 262	13.154	20.339	7.017	1.00	56.23		C
ATOM	4112	CG	TRP A 262	11.652	20.135	7.269	1.00	61.23		C
ATOM	4113	CD1	TRP A 262	10.780	21.050	7.761	1.00	66.49		C
ATOM	4115	NE1	TRP A 262	9.525	20.510	7.874	1.00	68.50		N
ATOM	4117	CE2	TRP A 262	9.565	19.213	7.447	1.00	67.88		C
ATOM	4118	CD2	TRP A 262	10.889	18.941	7.064	1.00	61.30		C
ATOM	4119	CE3	TRP A 262	11.188	17.669	6.586	1.00	64.17		C
ATOM	4121	CZ3	TRP A 262	10.177	16.728	6.510	1.00	63.85		C
ATOM	4123	CH2	TRP A 262	8.879	17.034	6.896	1.00	66.57		C
ATOM	4125	CZ2	TRP A 262	8.547	18.266	7.365	1.00	66.36		C
ATOM	4127	C	TRP A 262	15.391	19.391	7.785	1.00	53.56		C
ATOM	4128	O	TRP A 262	15.769	18.849	6.757	1.00	56.81		O
ATOM	4129	N	LEU A 263	16.220	19.839	8.725	1.00	58.44		N
ATOM	4131	CA	LEU A 263	17.677	19.898	8.531	1.00	58.98		C
ATOM	4133	CB	LEU A 263	18.170	21.276	8.866	1.00	57.08		C
ATOM	4136	CG	LEU A 263	18.031	22.222	7.709	1.00	59.71		C
ATOM	4138	CD1	LEU A 263	18.483	23.577	8.206	1.00	59.96		C
ATOM	4142	CD2	LEU A 263	18.875	21.732	6.527	1.00	60.81		C
ATOM	4146	C	LEU A 263	18.468	18.983	9.398	1.00	62.54		C
ATOM	4147	O	LEU A 263	19.686	19.128	9.526	1.00	61.58		O
ATOM	4148	N	GLY A 264	17.778	18.046	10.012	1.00	67.37		N
ATOM	4150	CA	GLY A 264	18.436	17.118	10.893	1.00	70.18		C
ATOM	4153	C	GLY A 264	18.788	17.817	12.179	1.00	72.26		C
ATOM	4154	O	GLY A 264	18.910	17.143	13.194	1.00	76.04		O

ATOM	4155	N	GLU	A	265	18.927	19.149	12.149	1.00	71.01	N
ATOM	4157	CA	GLU	A	265	19.437	19.880	13.311	1.00	71.40	C
ATOM	4159	CB	GLU	A	265	19.648	21.383	13.034	1.00	71.95	C
ATOM	4162	CG	GLU	A	265	20.982	21.698	12.353	1.00	74.37	C
ATOM	4165	CD	GLU	A	265	20.958	22.955	11.471	1.00	74.89	C
ATOM	4166	OE1	GLU	A	265	21.757	23.022	10.500	1.00	63.91	O
ATOM	4167	OE2	GLU	A	265	20.142	23.876	11.745	1.00	80.45	O
ATOM	4168	C	GLU	A	265	18.592	19.716	14.547	1.00	70.60	C
ATOM	4169	O	GLU	A	265	19.099	19.216	15.542	1.00	72.28	O
ATOM	4170	N	GLN	A	266	17.322	20.118	14.516	1.00	68.36	N
ATOM	4172	CA	GLN	A	266	16.574	20.094	15.769	1.00	68.13	C
ATOM	4174	CB	GLN	A	266	16.036	21.431	16.254	1.00	71.81	C
ATOM	4177	CG	GLN	A	266	15.288	22.275	15.282	1.00	73.46	C
ATOM	4180	CD	GLN	A	266	15.211	23.702	15.831	1.00	80.14	C
ATOM	4181	OE1	GLN	A	266	16.098	24.530	15.578	1.00	78.16	O
ATOM	4182	NE2	GLN	A	266	14.163	23.982	16.604	1.00	81.99	N
ATOM	4185	C	GLN	A	266	15.495	19.132	15.770	1.00	65.19	C
ATOM	4186	O	GLN	A	266	14.952	18.739	14.761	1.00	68.32	O
ATOM	4187	N	LEU	A	267	15.179	18.751	16.973	1.00	62.13	N
ATOM	4189	CA	LEU	A	267	14.400	17.604	17.135	1.00	60.81	C
ATOM	4191	CB	LEU	A	267	14.990	16.849	18.335	1.00	60.23	C
ATOM	4194	CG	LEU	A	267	14.662	17.271	19.724	1.00	56.50	C
ATOM	4196	CD1	LEU	A	267	13.130	17.340	19.756	1.00	54.80	C
ATOM	4200	CD2	LEU	A	267	15.234	16.210	20.656	1.00	52.66	C
ATOM	4204	C	LEU	A	267	12.988	18.098	17.205	1.00	60.54	C
ATOM	4205	O	LEU	A	267	12.771	19.279	17.110	1.00	67.47	O
ATOM	4206	N	VAL	A	268	12.013	17.214	17.315	1.00	67.35	N
ATOM	4208	CA	VAL	A	268	10.617	17.635	17.398	1.00	64.13	C
ATOM	4210	CB	VAL	A	268	9.915	17.517	16.071	1.00	64.12	C
ATOM	4212	CG1	VAL	A	268	8.431	17.553	16.280	1.00	64.85	C
ATOM	4216	CG2	VAL	A	268	10.332	18.629	15.148	1.00	68.52	C
ATOM	4220	C	VAL	A	268	9.895	16.719	18.348	1.00	65.02	C
ATOM	4221	O	VAL	A	268	10.339	15.595	18.595	1.00	67.72	O
ATOM	4222	N	CYS	A	269	8.774	17.185	18.876	1.00	64.09	N
ATOM	4224	CA	CYS	A	269	8.045	16.373	19.822	1.00	64.62	C
ATOM	4226	CB	CYS	A	269	8.506	16.794	21.203	1.00	66.31	C
ATOM	4229	SG	CYS	A	269	10.286	17.212	21.240	1.00	69.02	S
ATOM	4230	C	CYS	A	269	6.523	16.452	19.735	1.00	64.55	C
ATOM	4231	O	CYS	A	269	5.943	17.350	19.089	1.00	67.95	O
ATOM	4232	N	TRP	A	270	5.899	15.479	20.395	1.00	61.04	N
ATOM	4234	CA	TRP	A	270	4.444	15.334	20.512	1.00	61.84	C
ATOM	4236	CB	TRP	A	270	3.764	14.554	19.371	1.00	56.93	C
ATOM	4239	CG	TRP	A	270	3.867	15.143	17.967	1.00	58.64	C
ATOM	4240	CD1	TRP	A	270	3.041	16.067	17.388	1.00	59.48	C
ATOM	4242	NE1	TRP	A	270	3.452	16.344	16.105	1.00	54.79	N
ATOM	4244	CE2	TRP	A	270	4.562	15.588	15.825	1.00	57.15	C
ATOM	4245	CD2	TRP	A	270	4.848	14.816	16.971	1.00	56.20	C
ATOM	4246	CE3	TRP	A	270	5.948	13.956	16.939	1.00	49.93	C
ATOM	4248	CZ3	TRP	A	270	6.708	13.889	15.796	1.00	55.27	C
ATOM	4250	CH2	TRP	A	270	6.395	14.667	14.667	1.00	58.79	C
ATOM	4252	CZ2	TRP	A	270	5.331	15.517	14.662	1.00	55.58	C
ATOM	4254	C	TRP	A	270	4.288	14.549	21.813	1.00	64.90	C
ATOM	4255	O	TRP	A	270	5.212	13.830	22.231	1.00	64.95	O
ATOM	4256	N	GLN	A	271	3.112	14.664	22.427	1.00	64.50	N
ATOM	4258	CA	GLN	A	271	2.891	14.202	23.791	1.00	59.95	C
ATOM	4260	CB	GLN	A	271	1.547	14.688	24.328	1.00	58.83	C
ATOM	4263	CG	GLN	A	271	1.117	16.045	23.773	1.00	65.33	C

ATOM	4266	CD	GLN	A	271	1.086	16.093	22.229	1.00	63.95	C
ATOM	4267	OE1	GLN	A	271	0.909	15.057	21.559	1.00	70.15	O
ATOM	4268	NE2	GLN	A	271	1.256	17.287	21.674	1.00	54.26	N
ATOM	4271	C	GLN	A	271	2.931	12.731	23.697	1.00	56.78	C
ATOM	4272	O	GLN	A	271	2.634	12.186	22.647	1.00	57.25	O
ATOM	4273	N	ALA	A	272	3.274	12.068	24.774	1.00	55.14	N
ATOM	4275	CA	ALA	A	272	3.457	10.637	24.671	1.00	58.98	C
ATOM	4277	CB	ALA	A	272	3.430	9.985	26.025	1.00	59.97	C
ATOM	4281	C	ALA	A	272	2.422	10.009	23.754	1.00	59.71	C
ATOM	4282	O	ALA	A	272	1.365	10.587	23.482	1.00	57.10	O
ATOM	4283	N	GLY	A	273	2.782	8.821	23.271	1.00	62.02	N
ATOM	4285	CA	GLY	A	273	1.952	7.965	22.431	1.00	59.67	C
ATOM	4288	C	GLY	A	273	0.981	8.622	21.490	1.00	58.98	C
ATOM	4289	O	GLY	A	273	0.009	7.967	21.115	1.00	61.66	O
ATOM	4290	N	THR	A	274	1.243	9.878	21.113	1.00	57.29	N
ATOM	4292	CA	THR	A	274	0.351	10.661	20.258	1.00	57.22	C
ATOM	4294	CB	THR	A	274	-0.108	11.911	21.023	1.00	63.52	C
ATOM	4296	OG1	THR	A	274	1.035	12.634	21.513	1.00	63.82	O
ATOM	4298	CG2	THR	A	274	-0.897	11.537	22.291	1.00	65.12	C
ATOM	4302	C	THR	A	274	0.994	11.128	18.943	1.00	54.80	C
ATOM	4303	O	THR	A	274	0.493	12.032	18.256	1.00	49.79	O
ATOM	4304	N	THR	A	275	2.104	10.534	18.560	1.00	50.99	N
ATOM	4306	CA	THR	A	275	2.712	11.010	17.345	1.00	50.86	C
ATOM	4308	CB	THR	A	275	4.033	10.303	17.107	1.00	53.40	C
ATOM	4310	OG1	THR	A	275	4.793	10.248	18.331	1.00	53.69	O
ATOM	4312	CG2	THR	A	275	4.901	11.074	16.111	1.00	48.79	C
ATOM	4316	C	THR	A	275	1.736	10.679	16.226	1.00	52.73	C
ATOM	4317	O	THR	A	275	1.230	9.560	16.129	1.00	55.77	O
ATOM	4318	N	PRO	A	276	1.456	11.656	15.399	1.00	48.39	N
ATOM	4319	CA	PRO	A	276	0.602	11.493	14.226	1.00	50.13	C
ATOM	4321	CB	PRO	A	276	0.223	12.950	13.952	1.00	50.02	C
ATOM	4324	CG	PRO	A	276	1.513	13.620	14.213	1.00	50.60	C
ATOM	4327	CD	PRO	A	276	1.877	13.055	15.554	1.00	53.12	C
ATOM	4330	C	PRO	A	276	1.265	10.862	12.974	1.00	42.85	C
ATOM	4331	O	PRO	A	276	1.501	11.537	11.980	1.00	39.08	O
ATOM	4332	N	TRP	A	277	1.527	9.567	12.997	1.00	46.18	N
ATOM	4334	CA	TRP	A	277	2.246	8.919	11.879	1.00	46.30	C
ATOM	4336	CB	TRP	A	277	2.339	7.449	12.146	1.00	41.35	C
ATOM	4339	CG	TRP	A	277	3.154	7.098	13.355	1.00	41.81	C
ATOM	4340	CD1	TRP	A	277	2.696	6.545	14.489	1.00	45.45	C
ATOM	4342	NE1	TRP	A	277	3.726	6.346	15.376	1.00	46.12	N
ATOM	4344	CE2	TRP	A	277	4.886	6.784	14.809	1.00	40.67	C
ATOM	4345	CD2	TRP	A	277	4.565	7.263	13.538	1.00	42.28	C
ATOM	4346	CE3	TRP	A	277	5.596	7.775	12.752	1.00	45.83	C
ATOM	4348	CZ3	TRP	A	277	6.872	7.785	13.257	1.00	41.25	C
ATOM	4350	CH2	TRP	A	277	7.153	7.296	14.526	1.00	37.21	C
ATOM	4352	CZ2	TRP	A	277	6.185	6.798	15.316	1.00	40.09	C
ATOM	4354	C	TRP	A	277	1.603	9.129	10.492	1.00	51.02	C
ATOM	4355	O	TRP	A	277	2.252	9.510	9.497	1.00	55.36	O
ATOM	4356	N	ASN	A	278	0.311	8.883	10.450	1.00	51.19	N
ATOM	4358	CA	ASN	A	278	-0.467	9.067	9.265	1.00	46.14	C
ATOM	4360	CB	ASN	A	278	-1.925	8.947	9.660	1.00	51.01	C
ATOM	4363	CG	ASN	A	278	-2.446	10.207	10.318	1.00	53.16	C
ATOM	4364	OD1	ASN	A	278	-2.406	11.277	9.728	1.00	56.07	O
ATOM	4365	ND2	ASN	A	278	-2.929	10.084	11.540	1.00	43.67	N
ATOM	4368	C	ASN	A	278	-0.250	10.367	8.505	1.00	47.14	C
ATOM	4369	O	ASN	A	278	-0.443	10.409	7.281	1.00	55.65	O

ATOM	4370	N	ILE	A	279	0.154	11.459	9.136	1.00 45.86	N
ATOM	4372	CA	ILE	A	279	0.262	12.647	8.283	1.00 40.58	C
ATOM	4374	CB	ILE	A	279	0.201	13.912	9.019	1.00 41.95	C
ATOM	4376	CG1	ILE	A	279	1.508	14.087	9.747	1.00 44.28	C
ATOM	4379	CD1	ILE	A	279	1.810	15.503	10.041	1.00 48.63	C
ATOM	4383	CG2	ILE	A	279	-1.078	13.936	9.940	1.00 40.98	C
ATOM	4387	C	ILE	A	279	1.502	12.647	7.511	1.00 41.25	C
ATOM	4388	O	ILE	A	279	1.571	13.405	6.527	1.00 41.55	O
ATOM	4389	N	PHE	A	280	2.494	11.830	7.932	1.00 42.95	N
ATOM	4391	CA	PHE	A	280	3.734	11.696	7.155	1.00 43.36	C
ATOM	4393	CB	PHE	A	280	4.914	11.371	8.031	1.00 47.33	C
ATOM	4396	CG	PHE	A	280	5.285	12.438	9.006	1.00 48.46	C
ATOM	4397	CD1	PHE	A	280	6.155	13.457	8.641	1.00 52.35	C
ATOM	4399	CE1	PHE	A	280	6.512	14.437	9.555	1.00 55.06	C
ATOM	4401	CZ	PHE	A	280	5.997	14.385	10.859	1.00 53.18	C
ATOM	4403	CE2	PHE	A	280	5.131	13.352	11.213	1.00 48.87	C
ATOM	4405	CD2	PHE	A	280	4.791	12.401	10.296	1.00 47.29	C
ATOM	4407	C	PHE	A	280	3.596	10.572	6.116	1.00 43.82	C
ATOM	4408	O	PHE	A	280	2.937	9.572	6.344	1.00 46.62	O
ATOM	4409	N	PRO	A	281	4.236	10.726	4.978	1.00 41.27	N
ATOM	4410	CA	PRO	A	281	4.127	9.768	3.874	1.00 35.61	C
ATOM	4412	CB	PRO	A	281	4.376	10.655	2.660	1.00 36.29	C
ATOM	4415	CG	PRO	A	281	5.171	11.767	3.144	1.00 35.91	C
ATOM	4418	CD	PRO	A	281	5.116	11.847	4.657	1.00 37.67	C
ATOM	4421	C	PRO	A	281	5.217	8.679	3.868	1.00 39.20	C
ATOM	4422	O	PRO	A	281	6.162	8.792	4.650	1.00 35.73	O
ATOM	4423	N	VAL	A	282	5.072	7.679	2.981	1.00 36.56	N
ATOM	4425	CA	VAL	A	282	5.987	6.562	2.819	1.00 35.89	C
ATOM	4427	CB	VAL	A	282	5.215	5.282	2.365	1.00 39.74	C
ATOM	4429	CG1	VAL	A	282	4.205	4.818	3.377	1.00 36.87	C
ATOM	4433	CG2	VAL	A	282	4.500	5.499	1.028	1.00 45.22	C
ATOM	4437	C	VAL	A	282	7.030	6.872	1.714	1.00 40.69	C
ATOM	4438	O	VAL	A	282	6.797	7.738	0.873	1.00 36.67	O
ATOM	4439	N	ILE	A	283	8.156	6.136	1.705	1.00 37.84	N
ATOM	4441	CA	ILE	A	283	9.241	6.356	0.712	1.00 38.96	C
ATOM	4443	CB	ILE	A	283	10.411	7.053	1.374	1.00 38.64	C
ATOM	4445	CG1	ILE	A	283	9.963	8.318	2.070	1.00 44.14	C
ATOM	4448	CD1	ILE	A	283	11.109	9.046	2.658	1.00 48.84	C
ATOM	4452	CG2	ILE	A	283	11.481	7.314	0.311	1.00 29.11	C
ATOM	4456	C	ILE	A	283	9.899	5.255	-0.053	1.00 41.40	C
ATOM	4457	O	ILE	A	283	10.851	4.668	0.441	1.00 62.61	O
ATOM	4458	N	SER	A	284	9.483	5.062	-1.293	1.00 44.38	N
ATOM	4460	CA	SER	A	284	9.856	3.861	-2.002	1.00 41.93	C
ATOM	4462	CB	SER	A	284	8.683	3.407	-2.819	1.00 42.78	C
ATOM	4465	OG	SER	A	284	7.555	3.197	-1.991	1.00 44.75	O
ATOM	4467	C	SER	A	284	11.040	4.075	-2.897	1.00 44.34	C
ATOM	4468	O	SER	A	284	11.022	4.922	-3.788	1.00 46.55	O
ATOM	4469	N	LEU	A	285	12.090	3.315	-2.656	1.00 41.54	N
ATOM	4471	CA	LEU	A	285	13.223	3.384	-3.521	1.00 37.02	C
ATOM	4473	CB	LEU	A	285	14.491	3.276	-2.717	1.00 35.95	C
ATOM	4476	CG	LEU	A	285	14.805	4.402	-1.704	1.00 38.01	C
ATOM	4478	CD1	LEU	A	285	16.196	4.144	-1.122	1.00 33.26	C
ATOM	4482	CD2	LEU	A	285	14.762	5.845	-2.251	1.00 33.22	C
ATOM	4486	C	LEU	A	285	13.043	2.195	-4.451	1.00 38.43	C
ATOM	4487	O	LEU	A	285	12.880	1.086	-3.978	1.00 43.06	O
ATOM	4488	N	TYR	A	286	13.017	2.399	-5.759	1.00 32.94	N
ATOM	4490	CA	TYR	A	286	12.855	1.262	-6.641	1.00 39.45	C

ATOM	4492	CB	TYR	A	286	12.115	1.611	-7.910	1.00	40.17	C
ATOM	4495	CG	TYR	A	286	10.614	1.743	-7.827	1.00	37.69	C
ATOM	4496	CD1	TYR	A	286	10.025	2.618	-6.958	1.00	35.81	C
ATOM	4498	CE1	TYR	A	286	8.690	2.751	-6.894	1.00	39.01	C
ATOM	4500	CZ	TYR	A	286	7.894	1.996	-7.713	1.00	40.22	C
ATOM	4501	OH	TYR	A	286	6.518	2.137	-7.632	1.00	32.05	O
ATOM	4503	CE2	TYR	A	286	8.476	1.130	-8.584	1.00	39.77	C
ATOM	4505	CD2	TYR	A	286	9.821	1.023	-8.648	1.00	35.63	C
ATOM	4507	C	TYR	A	286	14.207	0.832	-7.119	1.00	36.96	C
ATOM	4508	O	TYR	A	286	14.990	1.654	-7.483	1.00	41.56	O
ATOM	4509	N	LEU	A	287	14.465	-0.461	-7.177	1.00	37.56	N
ATOM	4511	CA	LEU	A	287	15.786	-0.941	-7.545	1.00	36.13	C
ATOM	4513	CB	LEU	A	287	16.385	-1.695	-6.391	1.00	37.50	C
ATOM	4516	CG	LEU	A	287	16.513	-1.001	-5.061	1.00	40.67	C
ATOM	4518	CD1	LEU	A	287	16.957	-2.079	-4.008	1.00	42.47	C
ATOM	4522	CD2	LEU	A	287	17.507	0.090	-5.144	1.00	37.99	C
ATOM	4526	C	LEU	A	287	15.760	-1.869	-8.700	1.00	32.81	C
ATOM	4527	O	LEU	A	287	14.789	-2.561	-8.889	1.00	42.24	O
ATOM	4528	N	MET	A	288	16.849	-1.897	-9.447	1.00	37.48	N
ATOM	4530	CA	MET	A	288	17.040	-2.777	-10.632	1.00	43.22	C
ATOM	4532	CB	MET	A	288	18.349	-2.356	-11.349	1.00	49.18	C
ATOM	4535	CG	MET	A	288	19.046	-3.419	-12.208	1.00	53.21	C
ATOM	4538	SD	MET	A	288	20.373	-2.706	-13.301	1.00	68.95	S
ATOM	4539	CE	MET	A	288	19.993	-0.904	-13.311	1.00	59.14	C
ATOM	4543	C	MET	A	288	17.104	-4.269	-10.276	1.00	42.94	C
ATOM	4544	O	MET	A	288	17.771	-4.671	-9.328	1.00	46.50	O
ATOM	4545	N	GLY	A	289	16.446	-5.098	-11.055	1.00	40.57	N
ATOM	4547	CA	GLY	A	289	16.290	-6.485	-10.682	1.00	43.24	C
ATOM	4550	C	GLY	A	289	17.409	-7.294	-11.225	1.00	48.62	C
ATOM	4551	O	GLY	A	289	18.320	-6.726	-11.761	1.00	57.55	O
ATOM	4552	N	GLU	A	290	17.366	-8.607	-11.061	1.00	54.59	N
ATOM	4554	CA	GLU	A	290	18.352	-9.464	-11.692	1.00	60.08	C
ATOM	4556	CB	GLU	A	290	18.531	-10.762	-10.927	1.00	61.43	C
ATOM	4559	CG	GLU	A	290	19.091	-10.548	-9.538	1.00	61.36	C
ATOM	4562	CD	GLU	A	290	19.931	-11.718	-9.077	1.00	61.64	C
ATOM	4563	OE1	GLU	A	290	19.365	-12.576	-8.331	1.00	47.44	O
ATOM	4564	OE2	GLU	A	290	21.142	-11.741	-9.471	1.00	55.78	O
ATOM	4565	C	GLU	A	290	17.928	-9.808	-13.091	1.00	63.07	C
ATOM	4566	O	GLU	A	290	18.755	-10.232	-13.887	1.00	67.93	O
ATOM	4567	N	VAL	A	291	16.643	-9.655	-13.398	1.00	65.43	N
ATOM	4569	CA	VAL	A	291	16.189	-9.910	-14.769	1.00	66.54	C
ATOM	4571	CB	VAL	A	291	14.926	-10.790	-14.824	1.00	64.54	C
ATOM	4573	CG1	VAL	A	291	14.666	-11.196	-16.218	1.00	66.22	C
ATOM	4577	CG2	VAL	A	291	15.116	-12.044	-14.013	1.00	66.62	C
ATOM	4581	C	VAL	A	291	16.027	-8.615	-15.607	1.00	64.98	C
ATOM	4582	O	VAL	A	291	15.564	-7.590	-15.135	1.00	67.86	O
ATOM	4583	N	THR	A	292	16.432	-8.687	-16.862	1.00	64.83	N
ATOM	4585	CA	THR	A	292	16.387	-7.554	-17.776	1.00	67.55	C
ATOM	4587	CB	THR	A	292	16.783	-8.068	-19.139	1.00	69.56	C
ATOM	4589	OG1	THR	A	292	17.890	-8.965	-18.992	1.00	74.68	O
ATOM	4591	CG2	THR	A	292	17.325	-6.980	-19.982	1.00	70.93	C
ATOM	4595	C	THR	A	292	15.015	-6.878	-17.870	1.00	67.32	C
ATOM	4596	O	THR	A	292	14.002	-7.532	-18.098	1.00	64.26	O
ATOM	4597	N	GLN	A	293	14.989	-5.562	-17.705	1.00	65.20	N
ATOM	4599	CA	GLN	A	293	13.735	-4.852	-17.700	1.00	65.67	C
ATOM	4601	CB	GLN	A	293	12.749	-5.543	-18.648	1.00	68.34	C
ATOM	4604	CG	GLN	A	293	12.971	-5.013	-19.979	1.00	69.90	C

ATOM	4607	CD	GLN	A	293	13.563	-3.662	-19.780	1.00	73.82	C
ATOM	4608	OE1	GLN	A	293	14.704	-3.406	-20.178	1.00	76.41	O
ATOM	4609	NE2	GLN	A	293	12.804	-2.784	-19.105	1.00	70.84	N
ATOM	4612	C	GLN	A	293	13.057	-4.736	-16.364	1.00	63.03	C
ATOM	4613	O	GLN	A	293	12.284	-3.803	-16.127	1.00	67.21	O
ATOM	4614	N	GLN	A	294	13.367	-5.661	-15.484	1.00	57.71	N
ATOM	4616	CA	GLN	A	294	12.562	-5.859	-14.307	1.00	56.14	C
ATOM	4618	CB	GLN	A	294	12.735	-7.332	-13.870	1.00	56.19	C
ATOM	4621	CG	GLN	A	294	11.579	-7.951	-13.090	1.00	56.15	C
ATOM	4624	CD	GLN	A	294	11.247	-9.407	-13.475	1.00	55.02	C
ATOM	4625	OE1	GLN	A	294	10.962	-10.255	-12.596	1.00	46.01	O
ATOM	4626	NE2	GLN	A	294	11.271	-9.693	-14.777	1.00	49.71	N
ATOM	4629	C	GLN	A	294	13.045	-4.905	-13.257	1.00	51.59	C
ATOM	4630	O	GLN	A	294	14.132	-4.397	-13.369	1.00	50.97	O
ATOM	4631	N	SER	A	295	12.229	-4.625	-12.260	1.00	47.06	N
ATOM	4633	CA	SER	A	295	12.740	-3.950	-11.063	1.00	48.50	C
ATOM	4635	CB	SER	A	295	12.882	-2.483	-11.321	1.00	42.42	C
ATOM	4638	OG	SER	A	295	11.655	-2.067	-11.834	1.00	48.16	O
ATOM	4640	C	SER	A	295	11.773	-4.171	-9.895	1.00	46.17	C
ATOM	4641	O	SER	A	295	10.676	-4.726	-10.059	1.00	48.16	O
ATOM	4642	N	PHE	A	296	12.146	-3.729	-8.721	1.00	37.72	N
ATOM	4644	CA	PHE	A	296	11.236	-3.922	-7.615	1.00	39.89	C
ATOM	4646	CB	PHE	A	296	11.533	-5.236	-6.978	1.00	39.36	C
ATOM	4649	CG	PHE	A	296	12.886	-5.286	-6.295	1.00	32.98	C
ATOM	4650	CD1	PHE	A	296	13.035	-4.863	-5.018	1.00	37.10	C
ATOM	4652	CE1	PHE	A	296	14.225	-4.924	-4.406	1.00	36.18	C
ATOM	4654	CZ	PHE	A	296	15.301	-5.395	-5.076	1.00	38.32	C
ATOM	4656	CE2	PHE	A	296	15.172	-5.807	-6.332	1.00	36.15	C
ATOM	4658	CD2	PHE	A	296	13.969	-5.760	-6.939	1.00	29.00	C
ATOM	4660	C	PHE	A	296	11.426	-2.840	-6.592	1.00	39.38	C
ATOM	4661	O	PHE	A	296	12.431	-2.151	-6.656	1.00	41.20	O
ATOM	4662	N	ARG	A	297	10.485	-2.688	-5.654	1.00	37.55	N
ATOM	4664	CA	ARG	A	297	10.624	-1.626	-4.641	1.00	38.59	C
ATOM	4666	CB	ARG	A	297	9.581	-0.566	-4.833	1.00	38.15	C
ATOM	4669	CG	ARG	A	297	8.264	-0.977	-4.508	1.00	37.91	C
ATOM	4672	CD	ARG	A	297	7.234	-0.020	-5.035	1.00	42.44	C
ATOM	4675	NE	ARG	A	297	5.889	-0.478	-4.612	1.00	45.80	N
ATOM	4677	CZ	ARG	A	297	4.753	-0.271	-5.262	1.00	40.89	C
ATOM	4678	NH1	ARG	A	297	4.710	0.368	-6.409	1.00	50.48	N
ATOM	4681	NH2	ARG	A	297	3.650	-0.712	-4.767	1.00	38.31	N
ATOM	4684	C	ARG	A	297	10.560	-1.944	-3.197	1.00	34.05	C
ATOM	4685	O	ARG	A	297	9.901	-2.904	-2.761	1.00	38.82	O
ATOM	4686	N	ILE	A	298	11.224	-1.092	-2.432	1.00	34.02	N
ATOM	4688	CA	ILE	A	298	11.194	-1.240	-0.978	1.00	33.72	C
ATOM	4690	CB	ILE	A	298	12.584	-1.357	-0.399	1.00	35.84	C
ATOM	4692	CG1	ILE	A	298	13.586	-0.429	-1.006	1.00	40.04	C
ATOM	4695	CD1	ILE	A	298	15.017	-0.629	-0.399	1.00	38.54	C
ATOM	4699	CG2	ILE	A	298	13.234	-2.643	-0.863	1.00	40.77	C
ATOM	4703	C	ILE	A	298	10.474	-0.050	-0.493	1.00	33.09	C
ATOM	4704	O	ILE	A	298	10.772	1.009	-0.956	1.00	35.93	O
ATOM	4705	N	THR	A	299	9.508	-0.206	0.402	1.00	38.13	N
ATOM	4707	CA	THR	A	299	8.788	0.958	0.930	1.00	39.87	C
ATOM	4709	CB	THR	A	299	7.268	0.829	0.737	1.00	41.38	C
ATOM	4711	OG1	THR	A	299	6.955	0.743	-0.658	1.00	41.84	O
ATOM	4713	CG2	THR	A	299	6.519	2.079	1.271	1.00	38.29	C
ATOM	4717	C	THR	A	299	9.017	1.219	2.412	1.00	39.18	C
ATOM	4718	O	THR	A	299	8.719	0.376	3.182	1.00	42.23	O

ATOM	4719	N	ILE	A	300	9.561	2.371	2.818	1.00	45.04	N
ATOM	4721	CA	ILE	A	300	9.712	2.602	4.257	1.00	43.86	C
ATOM	4723	CB	ILE	A	300	11.112	3.118	4.717	1.00	43.97	C
ATOM	4725	CG1	ILE	A	300	11.584	4.378	4.011	1.00	45.01	C
ATOM	4728	CD1	ILE	A	300	12.548	5.177	4.939	1.00	40.08	C
ATOM	4732	CG2	ILE	A	300	12.167	2.091	4.499	1.00	47.96	C
ATOM	4736	C	ILE	A	300	8.619	3.494	4.769	1.00	43.59	C
ATOM	4737	O	ILE	A	300	7.878	4.094	4.001	1.00	44.78	O
ATOM	4738	N	LEU	A	301	8.538	3.556	6.089	1.00	41.32	N
ATOM	4740	CA	LEU	A	301	7.515	4.294	6.798	1.00	39.77	C
ATOM	4742	CB	LEU	A	301	6.837	3.315	7.759	1.00	34.77	C
ATOM	4745	CG	LEU	A	301	6.052	2.205	7.119	1.00	30.44	C
ATOM	4747	CD1	LEU	A	301	5.467	1.524	8.188	1.00	30.86	C
ATOM	4751	CD2	LEU	A	301	4.968	2.698	6.252	1.00	34.38	C
ATOM	4755	C	LEU	A	301	8.106	5.431	7.632	1.00	39.51	C
ATOM	4756	O	LEU	A	301	9.292	5.472	7.850	1.00	44.43	O
ATOM	4757	N	PRO	A	302	7.286	6.338	8.142	1.00	38.79	N
ATOM	4758	CA	PRO	A	302	7.819	7.393	9.001	1.00	36.78	C
ATOM	4760	CB	PRO	A	302	6.590	8.187	9.424	1.00	37.00	C
ATOM	4763	CG	PRO	A	302	5.410	7.604	8.714	1.00	36.36	C
ATOM	4766	CD	PRO	A	302	5.832	6.424	7.958	1.00	36.66	C
ATOM	4769	C	PRO	A	302	8.510	6.797	10.226	1.00	38.02	C
ATOM	4770	O	PRO	A	302	9.516	7.327	10.642	1.00	33.13	O
ATOM	4771	N	GLN	A	303	7.995	5.719	10.811	1.00	38.55	N
ATOM	4773	CA	GLN	A	303	8.699	5.129	11.945	1.00	36.57	C
ATOM	4775	CB	GLN	A	303	8.003	3.902	12.457	1.00	35.69	C
ATOM	4778	CG	GLN	A	303	6.751	4.170	13.195	1.00	42.25	C
ATOM	4781	CD	GLN	A	303	5.602	4.274	12.297	1.00	34.75	C
ATOM	4782	OE1	GLN	A	303	5.772	4.591	11.130	1.00	46.30	O
ATOM	4783	NE2	GLN	A	303	4.416	4.026	12.820	1.00	42.67	N
ATOM	4786	C	GLN	A	303	10.113	4.672	11.588	1.00	42.43	C
ATOM	4787	O	GLN	A	303	10.807	4.115	12.404	1.00	44.66	O
ATOM	4788	N	GLN	A	304	10.554	4.872	10.373	1.00	44.05	N
ATOM	4790	CA	GLN	A	304	11.919	4.525	10.089	1.00	43.84	C
ATOM	4792	CB	GLN	A	304	12.025	3.506	8.939	1.00	44.50	C
ATOM	4795	CG	GLN	A	304	11.789	2.069	9.464	1.00	40.62	C
ATOM	4798	CD	GLN	A	304	10.436	1.517	9.204	1.00	41.50	C
ATOM	4799	OE1	GLN	A	304	9.915	0.808	10.039	1.00	46.70	O
ATOM	4800	NE2	GLN	A	304	9.849	1.830	8.050	1.00	43.88	N
ATOM	4803	C	GLN	A	304	12.735	5.769	9.864	1.00	43.47	C
ATOM	4804	O	GLN	A	304	13.806	5.890	10.460	1.00	57.31	O
ATOM	4805	N	TYR	A	305	12.253	6.709	9.056	1.00	43.84	N
ATOM	4807	CA	TYR	A	305	13.030	7.931	8.789	1.00	42.11	C
ATOM	4809	CB	TYR	A	305	12.741	8.542	7.383	1.00	42.55	C
ATOM	4812	CG	TYR	A	305	11.329	9.026	7.065	1.00	38.35	C
ATOM	4813	CD1	TYR	A	305	10.846	10.230	7.553	1.00	39.92	C
ATOM	4815	CE1	TYR	A	305	9.579	10.679	7.245	1.00	38.06	C
ATOM	4817	CZ	TYR	A	305	8.745	9.931	6.432	1.00	44.35	C
ATOM	4818	OH	TYR	A	305	7.445	10.380	6.121	1.00	47.26	O
ATOM	4820	CE2	TYR	A	305	9.206	8.737	5.934	1.00	41.55	C
ATOM	4822	CD2	TYR	A	305	10.502	8.296	6.252	1.00	39.60	C
ATOM	4824	C	TYR	A	305	12.920	8.991	9.901	1.00	42.17	C
ATOM	4825	O	TYR	A	305	13.587	10.034	9.828	1.00	47.00	O
ATOM	4826	N	LEU	A	306	12.096	8.727	10.910	1.00	38.60	N
ATOM	4828	CA	LEU	A	306	11.947	9.618	12.065	1.00	42.86	C
ATOM	4830	CB	LEU	A	306	10.473	9.989	12.345	1.00	38.48	C
ATOM	4833	CG	LEU	A	306	9.755	11.015	11.422	1.00	39.42	C

ATOM	4835	CD1	LEU	A	306	8.401	11.473	11.981	1.00	36.26	C
ATOM	4839	CD2	LEU	A	306	10.561	12.258	11.132	1.00	36.89	C
ATOM	4843	C	LEU	A	306	12.538	8.831	13.236	1.00	48.77	C
ATOM	4844	O	LEU	A	306	11.887	7.927	13.807	1.00	51.36	O
ATOM	4845	N	ARG	A	307	13.770	9.181	13.589	1.00	47.61	N
ATOM	4847	CA	ARG	A	307	14.523	8.445	14.583	1.00	47.50	C
ATOM	4849	CB	ARG	A	307	15.977	8.359	14.079	1.00	46.68	C
ATOM	4852	CG	ARG	A	307	17.104	8.267	15.066	1.00	41.90	C
ATOM	4855	CD	ARG	A	307	18.410	8.260	14.346	1.00	41.76	C
ATOM	4858	NE	ARG	A	307	19.209	9.451	14.580	1.00	42.84	N
ATOM	4860	CZ	ARG	A	307	19.635	9.809	15.767	1.00	42.66	C
ATOM	4861	NH1	ARG	A	307	19.325	9.068	16.827	1.00	44.80	N
ATOM	4864	NH2	ARG	A	307	20.373	10.891	15.905	1.00	41.35	N
ATOM	4867	C	ARG	A	307	14.391	9.070	15.969	1.00	52.43	C
ATOM	4868	O	ARG	A	307	14.582	10.268	16.145	1.00	51.41	O
ATOM	4869	N	PRO	A	308	14.052	8.249	16.959	1.00	57.65	N
ATOM	4870	CA	PRO	A	308	13.891	8.738	18.339	1.00	55.79	C
ATOM	4872	CB	PRO	A	308	13.330	7.543	19.096	1.00	57.01	C
ATOM	4875	CG	PRO	A	308	13.086	6.449	18.086	1.00	57.54	C
ATOM	4878	CD	PRO	A	308	13.797	6.803	16.819	1.00	53.58	C
ATOM	4881	C	PRO	A	308	15.184	9.100	19.017	1.00	60.31	C
ATOM	4882	O	PRO	A	308	16.192	8.452	18.810	1.00	58.95	O
ATOM	4883	N	VAL	A	309	15.129	10.142	19.841	1.00	64.67	N
ATOM	4885	CA	VAL	A	309	16.216	10.523	20.718	1.00	59.88	C
ATOM	4887	CB	VAL	A	309	16.826	11.759	20.274	1.00	57.52	C
ATOM	4889	CG1	VAL	A	309	16.931	11.787	18.790	1.00	58.97	C
ATOM	4893	CG2	VAL	A	309	15.968	12.873	20.747	1.00	60.32	C
ATOM	4897	C	VAL	A	309	15.562	10.936	22.006	1.00	63.55	C
ATOM	4898	O	VAL	A	309	14.369	11.169	22.030	1.00	65.36	O
ATOM	4899	N	GLU	A	310	16.327	11.070	23.074	1.00	73.08	N
ATOM	4901	CA	GLU	A	310	15.760	11.539	24.338	1.00	80.08	C
ATOM	4903	CB	GLU	A	310	16.753	11.379	25.475	1.00	81.78	C
ATOM	4906	CG	GLU	A	310	16.107	11.808	26.784	1.00	86.56	C
ATOM	4909	CD	GLU	A	310	14.633	11.391	26.845	1.00	90.07	C
ATOM	4910	OE1	GLU	A	310	14.305	10.227	26.469	1.00	87.88	O
ATOM	4911	OE2	GLU	A	310	13.795	12.227	27.261	1.00	91.15	O
ATOM	4912	C	GLU	A	310	15.310	13.005	24.359	1.00	82.88	C
ATOM	4913	O	GLU	A	310	16.115	13.897	24.106	1.00	83.61	O
ATOM	4914	N	ASP	A	311	14.039	13.256	24.686	1.00	86.59	N
ATOM	4916	CA	ASP	A	311	13.540	14.636	24.758	1.00	88.79	C
ATOM	4918	CB	ASP	A	311	12.066	14.716	25.204	1.00	89.65	C
ATOM	4921	CG	ASP	A	311	11.606	16.165	25.563	1.00	89.46	C
ATOM	4922	OD1	ASP	A	311	12.281	17.161	25.205	1.00	89.51	O
ATOM	4923	OD2	ASP	A	311	10.557	16.393	26.211	1.00	88.07	O
ATOM	4924	C	ASP	A	311	14.414	15.373	25.737	1.00	89.45	C
ATOM	4925	O	ASP	A	311	14.741	14.867	26.813	1.00	87.75	O
ATOM	4926	N	VAL	A	312	14.782	16.582	25.353	1.00	93.56	N
ATOM	4928	CA	VAL	A	312	15.717	17.361	26.138	1.00	96.45	C
ATOM	4930	CB	VAL	A	312	15.534	18.893	25.873	1.00	95.52	C
ATOM	4932	CG1	VAL	A	312	16.767	19.678	26.302	1.00	96.45	C
ATOM	4936	CG2	VAL	A	312	15.280	19.146	24.380	1.00	95.45	C
ATOM	4940	C	VAL	A	312	15.614	16.978	27.629	1.00	98.94	C
ATOM	4941	O	VAL	A	312	16.541	16.375	28.178	1.00	100.66	O
ATOM	4942	N	ALA	A	313	14.480	17.277	28.263	1.00	101.21	N
ATOM	4944	CA	ALA	A	313	14.360	17.156	29.723	1.00	101.91	C
ATOM	4946	CB	ALA	A	313	13.530	18.320	30.281	1.00	102.46	C
ATOM	4950	C	ALA	A	313	13.798	15.850	30.241	1.00	103.33	C

ATOM	4951	O	ALA	A	313	13.100	15.844	31.264	1.00103.69	O
ATOM	4952	N	THR	A	314	14.094	14.747	29.550	1.00103.85	N
ATOM	4954	CA	THR	A	314	13.656	13.428	30.005	1.00102.71	C
ATOM	4956	CB	THR	A	314	14.576	12.945	31.136	1.00103.86	C
ATOM	4958	OG1	THR	A	314	14.595	13.910	32.195	1.00101.42	O
ATOM	4960	CG2	THR	A	314	16.027	12.918	30.655	1.00104.20	C
ATOM	4964	C	THR	A	314	12.227	13.662	30.456	1.00101.12	C
ATOM	4965	O	THR	A	314	11.733	13.087	31.435	1.00 99.40	O
ATOM	4966	N	SER	A	315	11.600	14.554	29.681	1.00100.26	N
ATOM	4968	CA	SER	A	315	10.272	15.102	29.911	1.00 97.93	C
ATOM	4970	CB	SER	A	315	10.176	16.571	29.468	1.00 98.22	C
ATOM	4973	OG	SER	A	315	9.684	16.683	28.145	1.00 97.07	O
ATOM	4975	C	SER	A	315	9.481	14.178	29.038	1.00 94.99	C
ATOM	4976	O	SER	A	315	10.031	13.632	28.084	1.00 94.86	O
ATOM	4977	N	GLN	A	316	8.199	14.003	29.309	1.00 92.82	N
ATOM	4979	CA	GLN	A	316	7.575	12.760	28.827	1.00 92.34	C
ATOM	4981	CB	GLN	A	316	6.562	12.202	29.847	1.00 93.31	C
ATOM	4984	CG	GLN	A	316	7.167	11.182	30.838	1.00 96.96	C
ATOM	4987	CD	GLN	A	316	6.165	10.697	31.905	1.00100.71	C
ATOM	4988	OE1	GLN	A	316	4.983	11.049	31.855	1.00104.74	O
ATOM	4989	NE2	GLN	A	316	6.641	9.900	32.862	1.00 96.70	N
ATOM	4992	C	GLN	A	316	6.981	12.858	27.449	1.00 86.40	C
ATOM	4993	O	GLN	A	316	5.893	12.387	27.200	1.00 87.16	O
ATOM	4994	N	ASP	A	317	7.727	13.465	26.549	1.00 81.89	N
ATOM	4996	CA	ASP	A	317	7.241	13.689	25.213	1.00 82.26	C
ATOM	4998	CB	ASP	A	317	7.243	15.194	24.971	1.00 84.30	C
ATOM	5001	CG	ASP	A	317	6.705	15.965	26.178	1.00 89.01	C
ATOM	5002	OD1	ASP	A	317	5.730	15.458	26.802	1.00 91.04	O
ATOM	5003	OD2	ASP	A	317	7.188	17.060	26.578	1.00 87.88	O
ATOM	5004	C	ASP	A	317	8.072	12.925	24.173	1.00 78.89	C
ATOM	5005	O	ASP	A	317	9.277	13.134	24.036	1.00 81.83	O
ATOM	5006	N	ASP	A	318	7.428	12.025	23.439	1.00 73.81	N
ATOM	5008	CA	ASP	A	318	8.155	11.262	22.451	1.00 66.66	C
ATOM	5010	CB	ASP	A	318	7.241	10.236	21.763	1.00 64.21	C
ATOM	5013	CG	ASP	A	318	6.808	9.090	22.706	1.00 64.94	C
ATOM	5014	OD1	ASP	A	318	5.736	8.463	22.486	1.00 68.15	O
ATOM	5015	OD2	ASP	A	318	7.470	8.740	23.698	1.00 61.61	O
ATOM	5016	C	ASP	A	318	8.666	12.307	21.485	1.00 61.08	C
ATOM	5017	O	ASP	A	318	7.859	12.973	20.848	1.00 60.70	O
ATOM	5018	N	CYS	A	319	9.990	12.464	21.414	1.00 55.63	N
ATOM	5020	CA	CYS	A	319	10.655	13.418	20.497	1.00 55.86	C
ATOM	5022	CB	CYS	A	319	11.595	14.339	21.302	1.00 56.79	C
ATOM	5025	SG	CYS	A	319	10.863	15.611	22.418	1.00 63.91	S
ATOM	5026	C	CYS	A	319	11.458	12.689	19.373	1.00 51.54	C
ATOM	5027	O	CYS	A	319	11.816	11.533	19.532	1.00 51.66	O
ATOM	5028	N	TYR	A	320	11.761	13.350	18.252	1.00 52.64	N
ATOM	5030	CA	TYR	A	320	12.442	12.673	17.126	1.00 52.76	C
ATOM	5032	CB	TYR	A	320	11.419	11.973	16.190	1.00 54.35	C
ATOM	5035	CG	TYR	A	320	10.480	10.999	16.836	1.00 48.89	C
ATOM	5036	CD1	TYR	A	320	9.245	11.395	17.280	1.00 51.58	C
ATOM	5038	CE1	TYR	A	320	8.367	10.513	17.879	1.00 51.79	C
ATOM	5040	CZ	TYR	A	320	8.724	9.195	18.030	1.00 59.86	C
ATOM	5041	OH	TYR	A	320	7.873	8.275	18.620	1.00 65.37	O
ATOM	5043	CE2	TYR	A	320	9.952	8.770	17.589	1.00 61.76	C
ATOM	5045	CD2	TYR	A	320	10.828	9.691	16.988	1.00 58.71	C
ATOM	5047	C	TYR	A	320	13.207	13.621	16.224	1.00 49.27	C
ATOM	5048	O	TYR	A	320	12.864	14.785	16.151	1.00 48.00	O

ATOM	5049	N	LYS A 321	14.208	13.094	15.517	1.00	47.06		N
ATOM	5051	CA	LYS A 321	15.025	13.851	14.547	1.00	49.46		C
ATOM	5053	CB	LYS A 321	16.515	13.796	14.895	1.00	48.67		C
ATOM	5056	CG	LYS A 321	17.182	15.141	15.141	1.00	53.31		C
ATOM	5059	CD	LYS A 321	18.714	15.093	14.895	1.00	53.64		C
ATOM	5062	CE	LYS A 321	19.429	16.349	15.512	1.00	55.80		C
ATOM	5065	NZ	LYS A 321	20.917	16.178	15.790	1.00	57.93		N
ATOM	5069	C	LYS A 321	14.857	13.255	13.163	1.00	43.54		C
ATOM	5070	O	LYS A 321	14.681	12.069	13.016	1.00	49.60		O
ATOM	5071	N	PHE A 322	14.947	14.097	12.161	1.00	41.25		N
ATOM	5073	CA	PHE A 322	14.655	13.750	10.791	1.00	43.43		C
ATOM	5075	CB	PHE A 322	14.199	15.061	10.075	1.00	45.65		C
ATOM	5078	CG	PHE A 322	13.807	14.910	8.629	1.00	41.86		C
ATOM	5079	CD1	PHE A 322	12.758	14.134	8.257	1.00	41.79		C
ATOM	5081	CE1	PHE A 322	12.427	14.000	6.960	1.00	37.29		C
ATOM	5083	CZ	PHE A 322	13.125	14.653	5.982	1.00	40.05		C
ATOM	5085	CE2	PHE A 322	14.158	15.436	6.310	1.00	42.54		C
ATOM	5087	CD2	PHE A 322	14.509	15.566	7.642	1.00	46.49		C
ATOM	5089	C	PHE A 322	15.961	13.138	10.239	1.00	48.97		C
ATOM	5090	O	PHE A 322	16.981	13.817	10.014	1.00	48.91		O
ATOM	5091	N	ALA A 323	15.922	11.831	10.036	1.00	42.08		N
ATOM	5093	CA	ALA A 323	17.072	11.115	9.597	1.00	39.45		C
ATOM	5095	CB	ALA A 323	17.011	9.753	10.228	1.00	38.16		C
ATOM	5099	C	ALA A 323	17.297	11.012	8.047	1.00	42.70		C
ATOM	5100	O	ALA A 323	17.863	10.006	7.562	1.00	40.41		O
ATOM	5101	N	ILE A 324	16.914	12.027	7.268	1.00	39.06		N
ATOM	5103	CA	ILE A 324	17.177	11.971	5.799	1.00	40.46		C
ATOM	5105	CB	ILE A 324	15.911	12.049	4.976	1.00	35.33		C
ATOM	5107	CG1	ILE A 324	15.063	10.826	5.158	1.00	41.82		C
ATOM	5110	CD1	ILE A 324	13.800	10.854	4.283	1.00	45.15		C
ATOM	5114	CG2	ILE A 324	16.241	12.092	3.553	1.00	39.72		C
ATOM	5118	C	ILE A 324	18.000	13.179	5.453	1.00	41.45		C
ATOM	5119	O	ILE A 324	17.491	14.268	5.571	1.00	47.75		O
ATOM	5120	N	SER A 325	19.244	13.022	5.011	1.00	45.67		N
ATOM	5122	CA	SER A 325	20.148	14.181	4.894	1.00	47.83		C
ATOM	5124	CB	SER A 325	21.194	14.129	5.977	1.00	51.02		C
ATOM	5127	OG	SER A 325	21.991	12.978	5.786	1.00	60.15		O
ATOM	5129	C	SER A 325	20.831	14.230	3.573	1.00	44.39		C
ATOM	5130	O	SER A 325	20.699	13.316	2.780	1.00	51.62		O
ATOM	5131	N	GLN A 326	21.579	15.286	3.320	1.00	49.08		N
ATOM	5133	CA	GLN A 326	22.095	15.527	1.954	1.00	50.41		C
ATOM	5135	CB	GLN A 326	21.980	17.004	1.575	1.00	50.65		C
ATOM	5138	CG	GLN A 326	22.818	17.900	2.410	1.00	59.27		C
ATOM	5141	CD	GLN A 326	22.308	19.336	2.379	1.00	69.60		C
ATOM	5142	OE1	GLN A 326	22.805	20.165	1.608	1.00	81.67		O
ATOM	5143	NE2	GLN A 326	21.315	19.636	3.215	1.00	74.53		N
ATOM	5146	C	GLN A 326	23.522	15.036	1.838	1.00	47.73		C
ATOM	5147	O	GLN A 326	24.139	14.823	2.858	1.00	39.28		O
ATOM	5148	N	SER A 327	24.036	14.838	0.616	1.00	50.50		N
ATOM	5150	CA	SER A 327	25.349	14.191	0.407	1.00	48.29		C
ATOM	5152	CB	SER A 327	25.170	12.660	0.588	1.00	50.33		C
ATOM	5155	OG	SER A 327	26.109	11.808	-0.130	1.00	44.83		O
ATOM	5157	C	SER A 327	26.057	14.402	-0.934	1.00	54.98		C
ATOM	5158	O	SER A 327	25.440	14.385	-2.005	1.00	60.63		O
ATOM	5159	N	SER A 328	27.375	14.538	-0.843	1.00	58.53		N
ATOM	5161	CA	SER A 328	28.228	14.891	-1.967	1.00	59.21		C
ATOM	5163	CB	SER A 328	29.294	15.862	-1.479	1.00	59.74		C

ATOM	5166	OG	SER	A	328	30.068	15.264	-0.446	1.00	58.39	O
ATOM	5168	C	SER	A	328	28.901	13.650	-2.507	1.00	63.61	C
ATOM	5169	O	SER	A	328	29.458	13.656	-3.630	1.00	62.54	O
ATOM	5170	N	THR	A	329	28.861	12.588	-1.696	1.00	60.68	N
ATOM	5172	CA	THR	A	329	29.372	11.305	-2.132	1.00	58.73	C
ATOM	5174	CB	THR	A	329	30.254	10.683	-1.073	1.00	59.15	C
ATOM	5176	OG1	THR	A	329	29.635	10.794	0.212	1.00	56.80	O
ATOM	5178	CG2	THR	A	329	31.542	11.477	-0.972	1.00	61.68	C
ATOM	5182	C	THR	A	329	28.280	10.328	-2.543	1.00	55.97	C
ATOM	5183	O	THR	A	329	28.473	9.113	-2.470	1.00	61.73	O
ATOM	5184	N	GLY	A	330	27.131	10.843	-2.965	1.00	52.78	N
ATOM	5186	CA	GLY	A	330	26.102	9.994	-3.558	1.00	47.81	C
ATOM	5189	C	GLY	A	330	25.072	9.508	-2.565	1.00	40.66	C
ATOM	5190	O	GLY	A	330	25.057	9.994	-1.446	1.00	41.70	O
ATOM	5191	N	THR	A	331	24.242	8.545	-2.962	1.00	37.29	N
ATOM	5193	CA	THR	A	331	23.170	8.072	-2.094	1.00	37.86	C
ATOM	5195	CB	THR	A	331	22.068	7.313	-2.904	1.00	39.26	C
ATOM	5197	OG1	THR	A	331	21.479	8.139	-3.916	1.00	39.31	O
ATOM	5199	CG2	THR	A	331	20.888	7.049	-2.051	1.00	42.31	C
ATOM	5203	C	THR	A	331	23.756	7.124	-1.078	1.00	39.73	C
ATOM	5204	O	THR	A	331	24.660	6.353	-1.407	1.00	44.56	O
ATOM	5205	N	VAL	A	332	23.258	7.178	0.154	1.00	40.26	N
ATOM	5207	CA	VAL	A	332	23.641	6.187	1.152	1.00	35.90	C
ATOM	5209	CB	VAL	A	332	24.604	6.690	2.229	1.00	40.57	C
ATOM	5211	CG1	VAL	A	332	24.912	5.525	3.187	1.00	39.73	C
ATOM	5215	CG2	VAL	A	332	25.881	7.177	1.612	1.00	41.22	C
ATOM	5219	C	VAL	A	332	22.424	5.582	1.853	1.00	42.39	C
ATOM	5220	O	VAL	A	332	21.729	6.293	2.599	1.00	41.60	O
ATOM	5221	N	MET	A	333	22.203	4.285	1.594	1.00	37.82	N
ATOM	5223	CA	MET	A	333	21.117	3.471	2.170	1.00	36.93	C
ATOM	5225	CB	MET	A	333	20.723	2.317	1.246	1.00	37.72	C
ATOM	5228	CG	MET	A	333	20.166	2.782	-0.085	1.00	41.56	C
ATOM	5231	SD	MET	A	333	19.579	1.455	-1.132	1.00	50.56	S
ATOM	5232	CE	MET	A	333	18.013	1.284	-0.388	1.00	55.20	C
ATOM	5236	C	MET	A	333	21.588	2.919	3.503	1.00	41.46	C
ATOM	5237	O	MET	A	333	22.205	1.777	3.611	1.00	39.46	O
ATOM	5238	N	GLY	A	334	21.291	3.762	4.508	1.00	40.49	N
ATOM	5240	CA	GLY	A	334	21.812	3.648	5.846	1.00	38.05	C
ATOM	5243	C	GLY	A	334	20.941	2.902	6.789	1.00	38.82	C
ATOM	5244	O	GLY	A	334	19.921	2.335	6.417	1.00	44.15	O
ATOM	5245	N	ALA	A	335	21.359	2.914	8.045	1.00	38.69	N
ATOM	5247	CA	ALA	A	335	20.658	2.169	9.044	1.00	38.89	C
ATOM	5249	CB	ALA	A	335	21.021	2.632	10.403	1.00	39.90	C
ATOM	5253	C	ALA	A	335	19.193	2.369	8.825	1.00	42.45	C
ATOM	5254	O	ALA	A	335	18.353	1.432	8.827	1.00	41.48	O
ATOM	5255	N	VAL	A	336	18.830	3.606	8.611	1.00	43.44	N
ATOM	5257	CA	VAL	A	336	17.425	3.755	8.643	1.00	46.66	C
ATOM	5259	CB	VAL	A	336	16.973	5.203	8.808	1.00	49.40	C
ATOM	5261	CG1	VAL	A	336	17.623	5.737	10.156	1.00	55.39	C
ATOM	5265	CG2	VAL	A	336	17.340	6.070	7.645	1.00	52.52	C
ATOM	5269	C	VAL	A	336	16.921	2.865	7.543	1.00	46.80	C
ATOM	5270	O	VAL	A	336	16.221	1.924	7.810	1.00	48.30	O
ATOM	5271	N	ILE	A	337	17.318	3.049	6.309	1.00	45.47	N
ATOM	5273	CA	ILE	A	337	16.677	2.216	5.338	1.00	36.74	C
ATOM	5275	CB	ILE	A	337	17.298	2.390	3.978	1.00	39.78	C
ATOM	5277	CG1	ILE	A	337	17.151	3.822	3.500	1.00	36.27	C
ATOM	5280	CD1	ILE	A	337	15.779	4.199	3.294	1.00	43.14	C

ATOM	5284	CG2	ILE	A	337	16.671	1.450	2.978	1.00	34.84	C
ATOM	5288	C	ILE	A	337	16.885	0.804	5.806	1.00	39.51	C
ATOM	5289	O	ILE	A	337	16.013	-0.096	5.623	1.00	35.70	O
ATOM	5290	N	MET	A	338	18.031	0.511	6.397	1.00	38.60	N
ATOM	5292	CA	MET	A	338	18.215	-0.928	6.662	1.00	39.01	C
ATOM	5294	CB	MET	A	338	19.673	-1.259	7.028	1.00	37.15	C
ATOM	5297	CG	MET	A	338	20.587	-1.321	5.812	1.00	38.15	C
ATOM	5300	SD	MET	A	338	22.320	-1.770	6.100	1.00	49.00	S
ATOM	5301	CE	MET	A	338	22.236	-3.500	6.563	1.00	47.85	C
ATOM	5305	C	MET	A	338	17.197	-1.470	7.680	1.00	36.06	C
ATOM	5306	O	MET	A	338	16.768	-2.596	7.615	1.00	40.65	O
ATOM	5307	N	GLU	A	339	16.780	-0.644	8.610	1.00	43.64	N
ATOM	5309	CA	GLU	A	339	15.981	-1.092	9.755	1.00	43.34	C
ATOM	5311	CB	GLU	A	339	15.922	0.036	10.811	1.00	44.54	C
ATOM	5314	CG	GLU	A	339	16.905	-0.101	11.984	1.00	50.03	C
ATOM	5317	CD	GLU	A	339	17.134	1.179	12.854	1.00	50.19	C
ATOM	5318	OE1	GLU	A	339	18.297	1.508	13.284	1.00	50.60	O
ATOM	5319	OE2	GLU	A	339	16.170	1.853	13.133	1.00	52.29	O
ATOM	5320	C	GLU	A	339	14.593	-1.616	9.375	1.00	44.44	C
ATOM	5321	O	GLU	A	339	13.825	-2.079	10.235	1.00	48.83	O
ATOM	5322	N	GLY	A	340	14.257	-1.572	8.096	1.00	37.01	N
ATOM	5324	CA	GLY	A	340	13.003	-2.140	7.664	1.00	35.04	C
ATOM	5327	C	GLY	A	340	13.074	-3.539	7.035	1.00	37.57	C
ATOM	5328	O	GLY	A	340	12.067	-4.268	6.954	1.00	30.82	O
ATOM	5329	N	PHE	A	341	14.251	-3.954	6.584	1.00	36.28	N
ATOM	5331	CA	PHE	A	341	14.284	-5.201	5.860	1.00	37.94	C
ATOM	5333	CB	PHE	A	341	14.549	-4.833	4.467	1.00	35.78	C
ATOM	5336	CG	PHE	A	341	13.721	-3.727	4.036	1.00	36.57	C
ATOM	5337	CD1	PHE	A	341	14.141	-2.449	4.214	1.00	42.48	C
ATOM	5339	CE1	PHE	A	341	13.364	-1.430	3.810	1.00	45.68	C
ATOM	5341	CZ	PHE	A	341	12.165	-1.691	3.237	1.00	43.50	C
ATOM	5343	CE2	PHE	A	341	11.735	-2.983	3.058	1.00	39.45	C
ATOM	5345	CD2	PHE	A	341	12.493	-3.971	3.451	1.00	39.09	C
ATOM	5347	C	PHE	A	341	15.287	-6.189	6.323	1.00	37.29	C
ATOM	5348	O	PHE	A	341	16.019	-5.890	7.200	1.00	41.19	O
ATOM	5349	N	TYR	A	342	15.294	-7.383	5.745	1.00	38.28	N
ATOM	5351	CA	TYR	A	342	16.295	-8.381	6.079	1.00	39.65	C
ATOM	5353	CB	TYR	A	342	15.710	-9.774	6.073	1.00	40.40	C
ATOM	5356	CG	TYR	A	342	16.664	-10.890	6.407	1.00	41.95	C
ATOM	5357	CD1	TYR	A	342	17.625	-10.727	7.340	1.00	43.94	C
ATOM	5359	CE1	TYR	A	342	18.488	-11.731	7.651	1.00	48.72	C
ATOM	5361	CZ	TYR	A	342	18.405	-12.947	7.036	1.00	49.33	C
ATOM	5362	OH	TYR	A	342	19.319	-13.922	7.408	1.00	51.44	O
ATOM	5364	CE2	TYR	A	342	17.442	-13.159	6.091	1.00	43.68	C
ATOM	5366	CD2	TYR	A	342	16.573	-12.122	5.784	1.00	47.27	C
ATOM	5368	C	TYR	A	342	17.119	-8.182	4.875	1.00	36.83	C
ATOM	5369	O	TYR	A	342	16.568	-8.334	3.816	1.00	38.58	O
ATOM	5370	N	VAL	A	343	18.398	-7.818	4.992	1.00	32.01	N
ATOM	5372	CA	VAL	A	343	19.202	-7.554	3.788	1.00	31.56	C
ATOM	5374	CB	VAL	A	343	20.074	-6.367	3.980	1.00	35.24	C
ATOM	5376	CG1	VAL	A	343	20.737	-5.970	2.673	1.00	32.39	C
ATOM	5380	CG2	VAL	A	343	19.278	-5.211	4.529	1.00	41.31	C
ATOM	5384	C	VAL	A	343	20.130	-8.701	3.611	1.00	29.86	C
ATOM	5385	O	VAL	A	343	20.695	-9.101	4.562	1.00	31.04	O
ATOM	5386	N	VAL	A	344	20.316	-9.232	2.414	1.00	33.91	N
ATOM	5388	CA	VAL	A	344	21.212	-10.337	2.216	1.00	28.64	C
ATOM	5390	CB	VAL	A	344	20.420	-11.348	1.500	1.00	33.00	C

ATOM	5392	CG1	VAL	A	344	21.253	-12.622	1.272	1.00	39.15	C
ATOM	5396	CG2	VAL	A	344	19.173	-11.671	2.320	1.00	32.27	C
ATOM	5400	C	VAL	A	344	22.433	-10.004	1.360	1.00	32.31	C
ATOM	5401	O	VAL	A	344	22.298	-9.878	0.166	1.00	36.99	O
ATOM	5402	N	PHE	A	345	23.621	-9.871	1.945	1.00	36.90	N
ATOM	5404	CA	PHE	A	345	24.822	-9.592	1.141	1.00	36.18	C
ATOM	5406	CB	PHE	A	345	25.861	-8.841	1.954	1.00	38.02	C
ATOM	5409	CG	PHE	A	345	25.449	-7.408	2.249	1.00	37.44	C
ATOM	5410	CD1	PHE	A	345	25.889	-6.348	1.501	1.00	42.15	C
ATOM	5412	CE1	PHE	A	345	25.487	-5.139	1.797	1.00	40.37	C
ATOM	5414	CZ	PHE	A	345	24.621	-4.914	2.850	1.00	36.09	C
ATOM	5416	CE2	PHE	A	345	24.186	-5.924	3.581	1.00	34.23	C
ATOM	5418	CD2	PHE	A	345	24.597	-7.177	3.279	1.00	32.71	C
ATOM	5420	C	PHE	A	345	25.443	-10.824	0.522	1.00	36.14	C
ATOM	5421	O	PHE	A	345	26.486	-11.317	0.958	1.00	39.03	O
ATOM	5422	N	ASP	A	346	24.785	-11.298	-0.525	1.00	35.28	N
ATOM	5424	CA	ASP	A	346	25.157	-12.498	-1.257	1.00	33.32	C
ATOM	5426	CB	ASP	A	346	23.865	-12.940	-1.938	1.00	43.05	C
ATOM	5429	CG	ASP	A	346	23.993	-14.184	-2.742	1.00	44.26	C
ATOM	5430	OD1	ASP	A	346	25.122	-14.682	-2.972	1.00	49.09	O
ATOM	5431	OD2	ASP	A	346	22.961	-14.707	-3.196	1.00	44.53	O
ATOM	5432	C	ASP	A	346	26.310	-12.270	-2.247	1.00	37.90	C
ATOM	5433	O	ASP	A	346	26.156	-12.107	-3.481	1.00	32.28	O
ATOM	5434	N	ARG	A	347	27.498	-12.256	-1.659	1.00	40.60	N
ATOM	5436	CA	ARG	A	347	28.764	-12.187	-2.385	1.00	37.22	C
ATOM	5438	CB	ARG	A	347	29.896	-12.280	-1.348	1.00	40.87	C
ATOM	5441	CG	ARG	A	347	29.903	-11.047	-0.457	1.00	34.79	C
ATOM	5444	CD	ARG	A	347	30.720	-11.142	0.739	1.00	35.83	C
ATOM	5447	NE	ARG	A	347	32.086	-11.477	0.381	1.00	46.81	N
ATOM	5449	CZ	ARG	A	347	33.161	-10.768	0.700	1.00	48.24	C
ATOM	5450	NH1	ARG	A	347	33.029	-9.658	1.397	1.00	55.18	N
ATOM	5453	NH2	ARG	A	347	34.372	-11.171	0.317	1.00	45.55	N
ATOM	5456	C	ARG	A	347	28.920	-13.265	-3.429	1.00	36.71	C
ATOM	5457	O	ARG	A	347	29.227	-12.993	-4.573	1.00	45.36	O
ATOM	5458	N	ALA	A	348	28.699	-14.501	-3.041	1.00	42.24	N
ATOM	5460	CA	ALA	A	348	28.835	-15.651	-3.960	1.00	46.74	C
ATOM	5462	CB	ALA	A	348	28.168	-16.883	-3.369	1.00	49.53	C
ATOM	5466	C	ALA	A	348	28.256	-15.440	-5.301	1.00	43.78	C
ATOM	5467	O	ALA	A	348	28.804	-15.893	-6.279	1.00	51.15	O
ATOM	5468	N	ARG	A	349	27.114	-14.772	-5.347	1.00	50.73	N
ATOM	5470	CA	ARG	A	349	26.435	-14.531	-6.606	1.00	45.15	C
ATOM	5472	CB	ARG	A	349	25.008	-15.048	-6.522	1.00	46.17	C
ATOM	5475	CG	ARG	A	349	25.021	-16.582	-6.566	1.00	50.92	C
ATOM	5478	CD	ARG	A	349	23.678	-17.332	-6.431	1.00	56.96	C
ATOM	5481	NE	ARG	A	349	22.731	-17.167	-7.546	1.00	58.75	N
ATOM	5483	CZ	ARG	A	349	21.525	-17.757	-7.576	1.00	59.56	C
ATOM	5484	NH1	ARG	A	349	21.140	-18.544	-6.575	1.00	56.83	N
ATOM	5487	NH2	ARG	A	349	20.699	-17.576	-8.596	1.00	57.83	N
ATOM	5490	C	ARG	A	349	26.515	-13.088	-7.031	1.00	46.61	C
ATOM	5491	O	ARG	A	349	26.054	-12.752	-8.115	1.00	48.78	O
ATOM	5492	N	LYS	A	350	27.108	-12.227	-6.198	1.00	43.49	N
ATOM	5494	CA	LYS	A	350	27.257	-10.824	-6.565	1.00	39.81	C
ATOM	5496	CB	LYS	A	350	27.981	-10.696	-7.901	1.00	42.63	C
ATOM	5499	CG	LYS	A	350	28.391	-9.252	-8.257	1.00	54.21	C
ATOM	5502	CD	LYS	A	350	29.456	-9.124	-9.427	1.00	58.86	C
ATOM	5505	CE	LYS	A	350	29.595	-7.616	-9.867	1.00	62.75	C
ATOM	5508	NZ	LYS	A	350	30.583	-7.261	-10.973	1.00	61.28	N

ATOM	5512	C	LYS	A	350	25.878	-10.169	-6.591	1.00	42.26	C
ATOM	5513	O	LYS	A	350	25.434	-9.629	-7.620	1.00	36.83	O
ATOM	5514	N	ARG	A	351	25.198	-10.229	-5.431	1.00	43.25	N
ATOM	5516	CA	ARG	A	351	23.853	-9.649	-5.285	1.00	39.90	C
ATOM	5518	CB	ARG	A	351	22.823	-10.612	-5.867	1.00	38.47	C
ATOM	5521	CG	ARG	A	351	22.635	-11.942	-5.173	1.00	40.60	C
ATOM	5524	CD	ARG	A	351	21.811	-12.900	-6.063	1.00	43.93	C
ATOM	5527	NE	ARG	A	351	21.546	-14.178	-5.418	1.00	50.64	N
ATOM	5529	CZ	ARG	A	351	20.398	-14.872	-5.490	1.00	44.16	C
ATOM	5530	NH1	ARG	A	351	19.376	-14.454	-6.184	1.00	30.21	N
ATOM	5533	NH2	ARG	A	351	20.298	-16.009	-4.839	1.00	45.65	N
ATOM	5536	C	ARG	A	351	23.449	-9.270	-3.872	1.00	34.43	C
ATOM	5537	O	ARG	A	351	23.928	-9.841	-2.946	1.00	40.67	O
ATOM	5538	N	ILE	A	352	22.562	-8.292	-3.711	1.00	34.43	N
ATOM	5540	CA	ILE	A	352	21.995	-7.958	-2.397	1.00	28.97	C
ATOM	5542	CB	ILE	A	352	22.232	-6.539	-2.051	1.00	30.73	C
ATOM	5544	CG1	ILE	A	352	23.729	-6.288	-2.019	1.00	31.97	C
ATOM	5547	CD1	ILE	A	352	24.027	-4.969	-2.366	1.00	34.88	C
ATOM	5551	CG2	ILE	A	352	21.688	-6.255	-0.674	1.00	32.36	C
ATOM	5555	C	ILE	A	352	20.527	-8.181	-2.397	1.00	31.19	C
ATOM	5556	O	ILE	A	352	19.848	-7.740	-3.309	1.00	31.73	O
ATOM	5557	N	GLY	A	353	20.032	-8.875	-1.372	1.00	36.35	N
ATOM	5559	CA	GLY	A	353	18.629	-9.239	-1.311	1.00	37.89	C
ATOM	5562	C	GLY	A	353	17.850	-8.451	-0.291	1.00	38.37	C
ATOM	5563	O	GLY	A	353	18.393	-8.137	0.759	1.00	42.00	O
ATOM	5564	N	PHE	A	354	16.586	-8.143	-0.592	1.00	37.07	N
ATOM	5566	CA	PHE	A	354	15.730	-7.427	0.352	1.00	31.53	C
ATOM	5568	CB	PHE	A	354	15.379	-5.999	-0.164	1.00	29.79	C
ATOM	5571	CG	PHE	A	354	16.557	-5.063	-0.308	1.00	26.28	C
ATOM	5572	CD1	PHE	A	354	17.323	-5.078	-1.450	1.00	32.33	C
ATOM	5574	CE1	PHE	A	354	18.424	-4.209	-1.598	1.00	34.84	C
ATOM	5576	CZ	PHE	A	354	18.742	-3.320	-0.581	1.00	35.73	C
ATOM	5578	CE2	PHE	A	354	17.971	-3.287	0.571	1.00	27.61	C
ATOM	5580	CD2	PHE	A	354	16.885	-4.148	0.704	1.00	28.09	C
ATOM	5582	C	PHE	A	354	14.415	-8.191	0.649	1.00	31.75	C
ATOM	5583	O	PHE	A	354	13.752	-8.665	-0.273	1.00	35.59	O
ATOM	5584	N	ALA	A	355	14.065	-8.308	1.934	1.00	26.00	N
ATOM	5586	CA	ALA	A	355	12.707	-8.676	2.345	1.00	25.47	C
ATOM	5588	CB	ALA	A	355	12.652	-10.035	2.579	1.00	28.36	C
ATOM	5592	C	ALA	A	355	12.222	-7.961	3.602	1.00	30.38	C
ATOM	5593	O	ALA	A	355	13.009	-7.387	4.333	1.00	31.09	O
ATOM	5594	N	VAL	A	356	10.912	-7.991	3.860	1.00	35.80	N
ATOM	5596	CA	VAL	A	356	10.326	-7.206	4.958	1.00	37.43	C
ATOM	5598	CB	VAL	A	356	8.800	-7.269	4.990	1.00	36.49	C
ATOM	5600	CG1	VAL	A	356	8.258	-6.199	5.891	1.00	41.38	C
ATOM	5604	CG2	VAL	A	356	8.253	-7.092	3.695	1.00	35.72	C
ATOM	5608	C	VAL	A	356	10.735	-7.852	6.243	1.00	41.52	C
ATOM	5609	O	VAL	A	356	10.683	-9.066	6.331	1.00	37.93	O
ATOM	5610	N	SER	A	357	11.104	-7.051	7.242	1.00	43.38	N
ATOM	5612	CA	SER	A	357	11.551	-7.584	8.506	1.00	39.52	C
ATOM	5614	CB	SER	A	357	12.327	-6.514	9.235	1.00	45.00	C
ATOM	5617	OG	SER	A	357	13.156	-7.090	10.258	1.00	55.64	O
ATOM	5619	C	SER	A	357	10.410	-8.000	9.368	1.00	45.19	C
ATOM	5620	O	SER	A	357	9.356	-7.417	9.314	1.00	52.71	O
ATOM	5621	N	ALA	A	358	10.599	-9.023	10.193	1.00	51.62	N
ATOM	5623	CA	ALA	A	358	9.558	-9.402	11.143	1.00	47.19	C
ATOM	5625	CB	ALA	A	358	9.455	-10.874	11.270	1.00	44.33	C

ATOM	5629	C	ALA	A	358	9.858	-8.814	12.486	1.00	53.26	C
ATOM	5630	O	ALA	A	358	9.324	-9.302	13.472	1.00	58.72	O
ATOM	5631	N	CYS	A	359	10.720	-7.790	12.540	1.00	54.45	N
ATOM	5633	CA	CYS	A	359	10.962	-7.065	13.779	1.00	52.85	C
ATOM	5635	CB	CYS	A	359	12.325	-7.455	14.429	1.00	55.72	C
ATOM	5638	SG	CYS	A	359	13.911	-6.785	13.755	1.00	65.10	S
ATOM	5639	C	CYS	A	359	10.793	-5.543	13.583	1.00	53.76	C
ATOM	5640	O	CYS	A	359	11.047	-4.789	14.519	1.00	60.53	O
ATOM	5641	N	HIS	A	360	10.332	-5.075	12.412	1.00	45.54	N
ATOM	5643	CA	HIS	A	360	10.265	-3.631	12.161	1.00	38.19	C
ATOM	5645	CB	HIS	A	360	10.274	-3.291	10.655	1.00	31.06	C
ATOM	5648	CG	HIS	A	360	8.951	-3.409	9.972	1.00	34.23	C
ATOM	5649	ND1	HIS	A	360	8.422	-4.617	9.566	1.00	43.85	N
ATOM	5651	CE1	HIS	A	360	7.259	-4.425	8.979	1.00	30.40	C
ATOM	5653	NE2	HIS	A	360	7.010	-3.130	8.992	1.00	36.44	N
ATOM	5655	CD2	HIS	A	360	8.051	-2.475	9.607	1.00	29.91	C
ATOM	5657	C	HIS	A	360	9.170	-2.820	12.921	1.00	41.87	C
ATOM	5658	O	HIS	A	360	8.085	-3.281	13.248	1.00	47.13	O
ATOM	5659	N	VAL	A	361	9.488	-1.576	13.194	1.00	36.30	N
ATOM	5661	CA	VAL	A	361	8.626	-0.768	13.971	1.00	36.06	C
ATOM	5663	CB	VAL	A	361	9.448	0.396	14.601	1.00	33.69	C
ATOM	5665	CG1	VAL	A	361	8.519	1.388	15.203	1.00	33.28	C
ATOM	5669	CG2	VAL	A	361	10.371	-0.136	15.590	1.00	30.28	C
ATOM	5673	C	VAL	A	361	7.498	-0.219	13.100	1.00	35.37	C
ATOM	5674	O	VAL	A	361	7.749	0.397	12.095	1.00	28.73	O
ATOM	5675	N	HIS	A	362	6.262	-0.453	13.489	1.00	38.93	N
ATOM	5677	CA	HIS	A	362	5.119	0.046	12.726	1.00	43.25	C
ATOM	5679	CB	HIS	A	362	4.939	-0.771	11.462	1.00	43.67	C
ATOM	5682	CG	HIS	A	362	4.555	-2.203	11.705	1.00	46.38	C
ATOM	5683	ND1	HIS	A	362	5.479	-3.210	11.850	1.00	49.03	N
ATOM	5685	CE1	HIS	A	362	4.855	-4.363	12.037	1.00	50.56	C
ATOM	5687	NE2	HIS	A	362	3.558	-4.143	12.013	1.00	45.23	N
ATOM	5689	CD2	HIS	A	362	3.345	-2.799	11.810	1.00	51.21	C
ATOM	5691	C	HIS	A	362	3.831	0.124	13.587	1.00	44.78	C
ATOM	5692	O	HIS	A	362	3.871	-0.147	14.749	1.00	49.93	O
ATOM	5693	N	ASP	A	363	2.704	0.524	13.028	1.00	48.91	N
ATOM	5695	CA	ASP	A	363	1.412	0.508	13.729	1.00	48.67	C
ATOM	5697	CB	ASP	A	363	0.779	1.835	13.601	1.00	48.80	C
ATOM	5700	CG	ASP	A	363	0.798	2.252	12.190	1.00	56.05	C
ATOM	5701	OD1	ASP	A	363	0.064	1.570	11.427	1.00	62.04	O
ATOM	5702	OD2	ASP	A	363	1.530	3.170	11.732	1.00	53.10	O
ATOM	5703	C	ASP	A	363	0.583	-0.390	12.839	1.00	50.55	C
ATOM	5704	O	ASP	A	363	1.082	-0.877	11.824	1.00	49.82	O
ATOM	5705	N	GLU	A	364	-0.698	-0.564	13.161	1.00	51.52	N
ATOM	5707	CA	GLU	A	364	-1.506	-1.526	12.443	1.00	50.07	C
ATOM	5709	CB	GLU	A	364	-2.705	-1.964	13.242	1.00	54.11	C
ATOM	5712	CG	GLU	A	364	-3.727	-0.871	13.464	1.00	56.03	C
ATOM	5715	CD	GLU	A	364	-5.070	-1.412	13.986	1.00	64.46	C
ATOM	5716	OE1	GLU	A	364	-6.040	-0.598	13.967	1.00	76.03	O
ATOM	5717	OE2	GLU	A	364	-5.182	-2.618	14.399	1.00	46.64	O
ATOM	5718	C	GLU	A	364	-1.989	-1.015	11.144	1.00	47.66	C
ATOM	5719	O	GLU	A	364	-2.524	-1.783	10.362	1.00	47.48	O
ATOM	5720	N	PHE	A	365	-1.799	0.259	10.884	1.00	41.55	N
ATOM	5722	CA	PHE	A	365	-2.309	0.801	9.651	1.00	44.15	C
ATOM	5724	CB	PHE	A	365	-2.603	2.213	9.951	1.00	42.84	C
ATOM	5727	CG	PHE	A	365	-3.640	2.376	10.974	1.00	42.11	C
ATOM	5728	CD1	PHE	A	365	-3.391	3.047	12.126	1.00	43.74	C

ATOM	5730	CE1	PHE	A	365	-4.332	3.195	13.033	1.00	43.17	C
ATOM	5732	CZ	PHE	A	365	-5.532	2.685	12.820	1.00	47.95	C
ATOM	5734	CE2	PHE	A	365	-5.793	2.006	11.673	1.00	50.59	C
ATOM	5736	CD2	PHE	A	365	-4.869	1.858	10.771	1.00	47.37	C
ATOM	5738	C	PHE	A	365	-1.462	0.662	8.321	1.00	46.25	C
ATOM	5739	O	PHE	A	365	-2.031	0.487	7.227	1.00	49.35	O
ATOM	5740	N	ARG	A	366	-0.143	0.745	8.428	1.00	42.85	N
ATOM	5742	CA	ARG	A	366	0.796	0.645	7.309	1.00	41.91	C
ATOM	5744	CB	ARG	A	366	1.398	1.997	6.985	1.00	40.96	C
ATOM	5747	CG	ARG	A	366	0.536	2.993	6.424	1.00	40.90	C
ATOM	5750	CD	ARG	A	366	1.341	4.073	5.811	1.00	40.88	C
ATOM	5753	NE	ARG	A	366	1.839	4.979	6.843	1.00	40.97	N
ATOM	5755	CZ	ARG	A	366	1.893	6.275	6.661	1.00	40.91	C
ATOM	5756	NH1	ARG	A	366	1.476	6.743	5.493	1.00	36.36	N
ATOM	5759	NH2	ARG	A	366	2.346	7.096	7.609	1.00	40.33	N
ATOM	5762	C	ARG	A	366	2.061	-0.090	7.758	1.00	41.93	C
ATOM	5763	O	ARG	A	366	2.491	0.129	8.894	1.00	41.59	O
ATOM	5764	N	THR	A	367	2.677	-0.865	6.847	1.00	37.72	N
ATOM	5766	CA	THR	A	367	3.839	-1.681	7.138	1.00	33.65	C
ATOM	5768	CB	THR	A	367	3.469	-3.107	7.143	1.00	42.32	C
ATOM	5770	OG1	THR	A	367	4.646	-3.854	6.891	1.00	43.84	O
ATOM	5772	CG2	THR	A	367	2.528	-3.460	5.969	1.00	43.37	C
ATOM	5776	C	THR	A	367	4.827	-1.507	6.066	1.00	32.72	C
ATOM	5777	O	THR	A	367	4.465	-1.157	4.970	1.00	34.98	O
ATOM	5778	N	ALA	A	368	6.110	-1.702	6.359	1.00	39.92	N
ATOM	5780	CA	ALA	A	368	7.135	-1.504	5.307	1.00	40.50	C
ATOM	5782	CB	ALA	A	368	8.485	-1.608	5.870	1.00	38.72	C
ATOM	5786	C	ALA	A	368	6.910	-2.529	4.180	1.00	43.33	C
ATOM	5787	O	ALA	A	368	6.181	-3.498	4.382	1.00	47.27	O
ATOM	5788	N	ALA	A	369	7.494	-2.369	2.998	1.00	41.85	N
ATOM	5790	CA	ALA	A	369	7.115	-3.346	1.966	1.00	38.56	C
ATOM	5792	CB	ALA	A	369	5.832	-2.891	1.277	1.00	40.40	C
ATOM	5796	C	ALA	A	369	8.162	-3.635	0.928	1.00	29.85	C
ATOM	5797	O	ALA	A	369	9.095	-2.854	0.730	1.00	36.35	O
ATOM	5798	N	VAL	A	370	7.966	-4.769	0.274	1.00	25.96	N
ATOM	5800	CA	VAL	A	370	8.831	-5.260	-0.769	1.00	29.57	C
ATOM	5802	CB	VAL	A	370	9.849	-6.185	-0.229	1.00	26.20	C
ATOM	5804	CG1	VAL	A	370	10.757	-6.632	-1.321	1.00	32.44	C
ATOM	5808	CG2	VAL	A	370	10.689	-5.482	0.827	1.00	30.95	C
ATOM	5812	C	VAL	A	370	7.929	-5.941	-1.796	1.00	31.92	C
ATOM	5813	O	VAL	A	370	7.225	-6.866	-1.490	1.00	36.53	O
ATOM	5814	N	GLU	A	371	7.945	-5.452	-3.029	1.00	33.29	N
ATOM	5816	CA	GLU	A	371	6.979	-5.876	-3.989	1.00	28.61	C
ATOM	5818	CB	GLU	A	371	5.769	-4.939	-3.899	1.00	32.04	C
ATOM	5821	CG	GLU	A	371	5.266	-4.723	-2.470	1.00	38.80	C
ATOM	5824	CD	GLU	A	371	4.374	-3.505	-2.287	1.00	44.41	C
ATOM	5825	OE1	GLU	A	371	3.119	-3.685	-2.230	1.00	55.91	O
ATOM	5826	OE2	GLU	A	371	4.919	-2.370	-2.177	1.00	45.34	O
ATOM	5827	C	GLU	A	371	7.625	-5.792	-5.338	1.00	34.43	C
ATOM	5828	O	GLU	A	371	8.335	-4.857	-5.587	1.00	31.86	O
ATOM	5829	N	GLY	A	372	7.410	-6.797	-6.201	1.00	41.45	N
ATOM	5831	CA	GLY	A	372	7.862	-6.730	-7.585	1.00	44.38	C
ATOM	5834	C	GLY	A	372	7.151	-7.793	-8.402	1.00	49.60	C
ATOM	5835	O	GLY	A	372	6.383	-8.580	-7.851	1.00	48.56	O
ATOM	5836	N	PRO	A	373	7.383	-7.862	-9.709	1.00	50.59	N
ATOM	5837	CA	PRO	A	373	8.248	-6.984	-10.495	1.00	49.61	C
ATOM	5839	CB	PRO	A	373	8.726	-7.915	-11.588	1.00	51.13	C

ATOM	5842	CG	PRO	A	373	7.732	-9.025	-11.666	1.00	50.04	C
ATOM	5845	CD	PRO	A	373	6.799	-8.918	-10.531	1.00	50.00	C
ATOM	5848	C	PRO	A	373	7.502	-5.877	-11.212	1.00	51.84	C
ATOM	5849	O	PRO	A	373	6.324	-6.033	-11.428	1.00	59.43	O
ATOM	5850	N	PHE	A	374	8.177	-4.797	-11.584	1.00	53.98	N
ATOM	5852	CA	PHE	A	374	7.578	-3.700	-12.360	1.00	55.44	C
ATOM	5854	CB	PHE	A	374	7.709	-2.369	-11.615	1.00	53.01	C
ATOM	5857	CG	PHE	A	374	7.163	-2.396	-10.227	1.00	51.03	C
ATOM	5858	CD1	PHE	A	374	7.959	-2.743	-9.179	1.00	47.22	C
ATOM	5860	CE1	PHE	A	374	7.448	-2.766	-7.895	1.00	52.78	C
ATOM	5862	CZ	PHE	A	374	6.132	-2.437	-7.669	1.00	52.67	C
ATOM	5864	CE2	PHE	A	374	5.326	-2.083	-8.737	1.00	49.05	C
ATOM	5866	CD2	PHE	A	374	5.840	-2.063	-9.987	1.00	49.61	C
ATOM	5868	C	PHE	A	374	8.342	-3.543	-13.656	1.00	57.87	C
ATOM	5869	O	PHE	A	374	9.536	-3.729	-13.651	1.00	59.75	O
ATOM	5870	N	VAL	A	375	7.692	-3.183	-14.762	1.00	68.38	N
ATOM	5872	CA	VAL	A	375	8.440	-3.007	-16.020	1.00	72.14	C
ATOM	5874	CB	VAL	A	375	7.752	-3.656	-17.217	1.00	73.03	C
ATOM	5876	CG1	VAL	A	375	8.601	-3.444	-18.453	1.00	71.54	C
ATOM	5880	CG2	VAL	A	375	7.514	-5.160	-16.966	1.00	72.18	C
ATOM	5884	C	VAL	A	375	8.757	-1.541	-16.347	1.00	76.96	C
ATOM	5885	O	VAL	A	375	7.909	-0.792	-16.840	1.00	79.60	O
ATOM	5886	N	THR	A	376	10.008	-1.161	-16.073	1.00	85.14	N
ATOM	5888	CA	THR	A	376	10.529	0.219	-16.248	1.00	88.23	C
ATOM	5890	CB	THR	A	376	11.255	0.740	-14.901	1.00	89.17	C
ATOM	5892	OG1	THR	A	376	11.057	-0.171	-13.804	1.00	90.48	O
ATOM	5894	CG2	THR	A	376	10.674	1.992	-14.352	1.00	86.17	C
ATOM	5898	C	THR	A	376	11.560	0.063	-17.389	1.00	88.70	C
ATOM	5899	O	THR	A	376	11.864	-1.086	-17.791	1.00	87.38	O
ATOM	5900	N	LEU	A	377	12.114	1.155	-17.922	1.00	87.83	N
ATOM	5902	CA	LEU	A	377	13.111	0.969	-18.996	1.00	88.50	C
ATOM	5904	CB	LEU	A	377	12.510	1.234	-20.409	1.00	90.35	C
ATOM	5907	CG	LEU	A	377	11.904	0.243	-21.438	1.00	89.96	C
ATOM	5909	CD1	LEU	A	377	12.034	0.935	-22.783	1.00	89.80	C
ATOM	5913	CD2	LEU	A	377	12.520	-1.159	-21.579	1.00	90.81	C
ATOM	5917	C	LEU	A	377	14.475	1.712	-18.873	1.00	89.75	C
ATOM	5918	O	LEU	A	377	14.792	2.450	-17.889	1.00	82.52	O
ATOM	5919	N	ASP	A	378	15.258	1.480	-19.937	1.00	92.45	N
ATOM	5921	CA	ASP	A	378	16.640	1.894	-20.006	1.00	95.71	C
ATOM	5923	CB	ASP	A	378	17.018	2.767	-21.238	1.00	98.28	C
ATOM	5926	CG	ASP	A	378	17.513	1.894	-22.480	1.00	102.00	C
ATOM	5927	OD1	ASP	A	378	17.062	2.143	-23.628	1.00	101.56	O
ATOM	5928	OD2	ASP	A	378	18.342	0.937	-22.402	1.00	102.38	O
ATOM	5929	C	ASP	A	378	16.922	2.405	-18.610	1.00	94.33	C
ATOM	5930	O	ASP	A	378	17.057	3.589	-18.295	1.00	96.66	O
ATOM	5931	N	MET	A	379	16.945	1.359	-17.798	1.00	91.54	N
ATOM	5933	CA	MET	A	379	17.353	1.328	-16.436	1.00	87.87	C
ATOM	5935	CB	MET	A	379	16.910	-0.019	-15.863	1.00	83.99	C
ATOM	5938	CG	MET	A	379	15.410	-0.082	-15.499	1.00	78.36	C
ATOM	5941	SD	MET	A	379	15.163	-1.374	-14.259	1.00	66.38	S
ATOM	5942	CE	MET	A	379	15.285	-2.746	-15.258	1.00	67.19	C
ATOM	5946	C	MET	A	379	18.885	1.495	-16.353	1.00	89.93	C
ATOM	5947	O	MET	A	379	19.336	2.602	-15.998	1.00	89.20	O
ATOM	5948	N	GLU	A	380	19.666	0.432	-16.667	1.00	90.93	N
ATOM	5950	CA	GLU	A	380	21.180	0.455	-16.602	1.00	93.24	C
ATOM	5952	CB	GLU	A	380	21.820	-0.615	-17.575	1.00	92.65	C
ATOM	5955	CG	GLU	A	380	23.205	-1.231	-17.244	1.00	91.21	C

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ATOM   5958  CD  GLU A 380      23.355  -1.819 -15.836  1.00 93.45           C
ATOM   5959  OE1 GLU A 380      23.037  -3.027 -15.615  1.00 84.68           O
ATOM   5960  OE2 GLU A 380      23.811  -1.058 -14.941  1.00 94.42           O
ATOM   5961  C   GLU A 380      21.762   1.922 -16.785  1.00 93.77           C
ATOM   5962  O   GLU A 380      22.744   2.305 -16.108  1.00 94.04           O
ATOM   5963  N   ASP A 381      21.142   2.717 -17.684  1.00 92.40           N
ATOM   5965  CA  ASP A 381      21.428   4.156 -17.845  1.00 89.14           C
ATOM   5967  CB  ASP A 381      20.206   4.883 -18.410  1.00 90.34           C
ATOM   5970  CG  ASP A 381      19.817   4.397 -19.774  1.00 96.59           C
ATOM   5971  OD1 ASP A 381      20.728   4.002 -20.536  1.00101.01           O
ATOM   5972  OD2 ASP A 381      18.627   4.380 -20.175  1.00 96.62           O
ATOM   5973  C   ASP A 381      21.691   4.860 -16.531  1.00 83.94           C
ATOM   5974  O   ASP A 381      22.594   5.688 -16.416  1.00 87.02           O
ATOM   5975  N   CYS A 382      20.883   4.521 -15.540  1.00 74.79           N
ATOM   5977  CA  CYS A 382      20.891   5.209 -14.273  1.00 66.78           C
ATOM   5979  CB  CYS A 382      19.874   4.543 -13.367  1.00 67.02           C
ATOM   5982  SG  CYS A 382      18.314   4.339 -14.255  1.00 65.45           S
ATOM   5983  C   CYS A 382      22.273   5.125 -13.730  1.00 62.15           C
ATOM   5984  O   CYS A 382      22.585   5.663 -12.700  1.00 59.92           O
ATOM   5985  N   GLY A 383      23.123   4.433 -14.447  1.00 61.83           N
ATOM   5987  CA  GLY A 383      24.478   4.336 -14.011  1.00 66.26           C
ATOM   5990  C   GLY A 383      25.143   5.670 -14.225  1.00 69.13           C
ATOM   5991  O   GLY A 383      25.005   6.281 -15.266  1.00 70.50           O
ATOM   5992  N   TYR A 384      25.854   6.144 -13.226  1.00 73.69           N
ATOM   5994  CA  TYR A 384      26.709   7.277 -13.454  1.00 77.96           C
ATOM   5996  CB  TYR A 384      26.793   8.188 -12.245  1.00 81.61           C
ATOM   5999  CG  TYR A 384      28.007   9.089 -12.283  1.00 85.12           C
ATOM   6000  CD1 TYR A 384      27.941  10.364 -12.854  1.00 88.82           C
ATOM   6002  CE1 TYR A 384      29.048  11.194 -12.893  1.00 87.19           C
ATOM   6004  CZ  TYR A 384      30.239  10.752 -12.358  1.00 90.20           C
ATOM   6005  OH  TYR A 384      31.364  11.553 -12.375  1.00 89.10           O
ATOM   6007  CE2 TYR A 384      30.320   9.490 -11.790  1.00 90.57           C
ATOM   6009  CD2 TYR A 384      29.208   8.670 -11.757  1.00 84.83           C
ATOM   6011  C   TYR A 384      28.056   6.649 -13.746  1.00 77.71           C
ATOM   6012  O   TYR A 384      28.429   5.664 -13.131  1.00 75.56           O
ATOM   6013  N   ASN A 385      28.780   7.220 -14.691  1.00 80.96           N
ATOM   6015  CA  ASN A 385      30.051   6.662 -15.125  1.00 82.76           C
ATOM   6017  CB  ASN A 385      29.941   6.194 -16.592  1.00 84.72           C
ATOM   6020  CG  ASN A 385      29.453   4.740 -16.736  1.00 87.65           C
ATOM   6021  OD1 ASN A 385      30.172   3.790 -16.404  1.00 85.93           O
ATOM   6022  ND2 ASN A 385      28.236   4.570 -17.258  1.00 88.07           N
ATOM   6025  C   ASN A 385      31.164   7.705 -14.990  1.00 83.09           C
ATOM   6026  O   ASN A 385      30.936   8.930 -14.965  1.00 81.57           O
ATOM   6027  OXT ASN A 385      32.333   7.337 -14.908  1.00 82.17           O
ATOM   6028  N   SER B  -2      27.206  72.118  43.679  1.00 55.48           N
ATOM   6030  CA  SER B  -2      27.761  73.467  43.412  1.00 51.63           C
ATOM   6032  CB  SER B  -2      29.098  73.250  42.712  1.00 52.68           C
ATOM   6035  OG  SER B  -2      29.217  71.863  42.380  1.00 49.83           O
ATOM   6037  C   SER B  -2      26.787  74.421  42.623  1.00 54.62           C
ATOM   6038  O   SER B  -2      26.955  75.629  42.639  1.00 56.38           O
ATOM   6041  N   PHE B  -1      25.784  73.900  41.916  1.00 57.53           N
ATOM   6043  CA  PHE B  -1      24.690  74.760  41.393  1.00 57.72           C
ATOM   6045  CB  PHE B  -1      24.532  74.456  39.920  1.00 56.01           C
ATOM   6048  CG  PHE B  -1      25.795  74.655  39.141  1.00 51.92           C
ATOM   6049  CD1 PHE B  -1      26.898  73.854  39.389  1.00 50.49           C
ATOM   6051  CE1 PHE B  -1      28.085  74.025  38.686  1.00 55.85           C
ATOM   6053  CZ  PHE B  -1      28.179  75.017  37.725  1.00 54.01           C
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ATOM	6055	CE2	PHE	B	-1	27.077	75.840	37.470	1.00	55.50	C
ATOM	6057	CD2	PHE	B	-1	25.888	75.657	38.182	1.00	50.57	C
ATOM	6059	C	PHE	B	-1	23.294	74.634	42.061	1.00	61.06	C
ATOM	6060	O	PHE	B	-1	22.332	74.340	41.364	1.00	68.12	O
ATOM	6061	N	VAL	B	0	23.176	74.848	43.380	1.00	62.33	N
ATOM	6063	CA	VAL	B	0	21.896	74.751	44.116	1.00	58.16	C
ATOM	6065	CB	VAL	B	0	21.965	75.382	45.528	1.00	61.92	C
ATOM	6067	CG1	VAL	B	0	22.579	74.434	46.564	1.00	61.26	C
ATOM	6071	CG2	VAL	B	0	22.697	76.717	45.480	1.00	64.85	C
ATOM	6075	C	VAL	B	0	20.728	75.507	43.571	1.00	59.05	C
ATOM	6076	O	VAL	B	0	19.588	75.100	43.748	1.00	64.61	O
ATOM	6077	N	GLU	B	1	20.973	76.632	42.925	1.00	61.72	N
ATOM	6079	CA	GLU	B	1	19.857	77.434	42.461	1.00	57.96	C
ATOM	6081	CB	GLU	B	1	20.322	78.617	41.603	1.00	57.40	C
ATOM	6084	CG	GLU	B	1	21.725	79.136	41.914	1.00	58.84	C
ATOM	6087	CD	GLU	B	1	22.786	78.540	41.002	1.00	60.23	C
ATOM	6088	OE1	GLU	B	1	22.369	77.908	40.015	1.00	67.79	O
ATOM	6089	OE2	GLU	B	1	24.023	78.696	41.244	1.00	55.89	O
ATOM	6090	C	GLU	B	1	19.026	76.490	41.626	1.00	57.15	C
ATOM	6091	O	GLU	B	1	17.785	76.566	41.632	1.00	51.98	O
ATOM	6092	N	MET	B	2	19.747	75.587	40.937	1.00	51.73	N
ATOM	6094	CA	MET	B	2	19.194	74.706	39.908	1.00	53.66	C
ATOM	6096	CB	MET	B	2	20.186	74.649	38.749	1.00	53.83	C
ATOM	6099	CG	MET	B	2	20.424	76.043	38.232	1.00	54.04	C
ATOM	6102	SD	MET	B	2	21.390	76.126	36.827	1.00	61.26	S
ATOM	6103	CE	MET	B	2	22.774	75.563	37.449	1.00	61.16	C
ATOM	6107	C	MET	B	2	18.775	73.312	40.298	1.00	53.70	C
ATOM	6108	O	MET	B	2	17.937	72.707	39.652	1.00	60.40	O
ATOM	6109	N	VAL	B	3	19.344	72.792	41.355	1.00	55.79	N
ATOM	6111	CA	VAL	B	3	18.997	71.464	41.806	1.00	54.02	C
ATOM	6113	CB	VAL	B	3	19.858	71.128	43.026	1.00	55.97	C
ATOM	6115	CG1	VAL	B	3	19.458	69.812	43.622	1.00	56.80	C
ATOM	6119	CG2	VAL	B	3	21.330	71.152	42.649	1.00	57.96	C
ATOM	6123	C	VAL	B	3	17.517	71.392	42.216	1.00	52.70	C
ATOM	6124	O	VAL	B	3	16.984	72.320	42.812	1.00	54.10	O
ATOM	6125	N	ASP	B	4	16.860	70.285	41.897	1.00	54.43	N
ATOM	6127	CA	ASP	B	4	15.474	70.048	42.309	1.00	58.27	C
ATOM	6129	CB	ASP	B	4	15.255	70.401	43.793	1.00	62.53	C
ATOM	6132	CG	ASP	B	4	15.485	69.206	44.726	1.00	71.31	C
ATOM	6133	OD1	ASP	B	4	15.328	69.381	45.965	1.00	76.06	O
ATOM	6134	OD2	ASP	B	4	15.822	68.060	44.317	1.00	75.48	O
ATOM	6135	C	ASP	B	4	14.543	70.851	41.443	1.00	53.53	C
ATOM	6136	O	ASP	B	4	13.461	71.276	41.875	1.00	51.34	O
ATOM	6137	N	ASN	B	5	14.978	71.054	40.209	1.00	50.18	N
ATOM	6139	CA	ASN	B	5	14.233	71.893	39.290	1.00	44.49	C
ATOM	6141	CB	ASN	B	5	15.122	72.909	38.651	1.00	42.71	C
ATOM	6144	CG	ASN	B	5	16.020	72.302	37.633	1.00	48.45	C
ATOM	6145	OD1	ASN	B	5	15.983	71.073	37.445	1.00	41.96	O
ATOM	6146	ND2	ASN	B	5	16.850	73.156	36.946	1.00	38.24	N
ATOM	6149	C	ASN	B	5	13.525	71.157	38.209	1.00	42.49	C
ATOM	6150	O	ASN	B	5	12.928	71.804	37.403	1.00	52.24	O
ATOM	6151	N	LEU	B	6	13.559	69.826	38.171	1.00	42.05	N
ATOM	6153	CA	LEU	B	6	12.673	69.114	37.261	1.00	39.02	C
ATOM	6155	CB	LEU	B	6	13.329	67.894	36.675	1.00	35.91	C
ATOM	6158	CG	LEU	B	6	14.619	68.130	35.905	1.00	35.63	C
ATOM	6160	CD1	LEU	B	6	15.044	66.856	35.207	1.00	35.19	C
ATOM	6164	CD2	LEU	B	6	14.462	69.193	34.893	1.00	29.54	C

ATOM	6168	C	LEU	B	6	11.446	68.653	37.996	1.00	42.53	C
ATOM	6169	O	LEU	B	6	11.394	68.726	39.205	1.00	53.16	O
ATOM	6170	N	ARG	B	7	10.436	68.228	37.245	1.00	42.75	N
ATOM	6172	CA	ARG	B	7	9.325	67.471	37.771	1.00	38.99	C
ATOM	6174	CB	ARG	B	7	8.103	68.326	37.963	1.00	41.20	C
ATOM	6177	CG	ARG	B	7	8.306	69.383	39.081	1.00	48.07	C
ATOM	6180	CD	ARG	B	7	7.066	70.215	39.470	1.00	48.13	C
ATOM	6183	NE	ARG	B	7	6.508	70.882	38.289	1.00	63.74	N
ATOM	6185	CZ	ARG	B	7	5.417	71.659	38.262	1.00	67.03	C
ATOM	6186	NH1	ARG	B	7	4.720	71.907	39.367	1.00	73.42	N
ATOM	6189	NH2	ARG	B	7	5.021	72.192	37.118	1.00	66.22	N
ATOM	6192	C	ARG	B	7	9.095	66.395	36.744	1.00	41.31	C
ATOM	6193	O	ARG	B	7	9.743	66.393	35.697	1.00	42.80	O
ATOM	6194	N	GLY	B	8	8.213	65.451	37.037	1.00	44.24	N
ATOM	6196	CA	GLY	B	8	7.775	64.510	36.017	1.00	44.58	C
ATOM	6199	C	GLY	B	8	8.126	63.080	36.314	1.00	52.57	C
ATOM	6200	O	GLY	B	8	8.464	62.734	37.457	1.00	54.12	O
ATOM	6201	N	LYS	B	9	8.059	62.251	35.270	1.00	55.79	N
ATOM	6203	CA	LYS	B	9	8.331	60.829	35.404	1.00	58.69	C
ATOM	6205	CB	LYS	B	9	7.136	60.163	36.102	1.00	63.35	C
ATOM	6208	CG	LYS	B	9	5.746	60.383	35.457	1.00	64.18	C
ATOM	6211	CD	LYS	B	9	4.812	59.234	35.916	1.00	65.46	C
ATOM	6214	CE	LYS	B	9	3.321	59.481	35.622	1.00	64.84	C
ATOM	6217	NZ	LYS	B	9	2.630	60.116	36.794	1.00	61.17	N
ATOM	6221	C	LYS	B	9	8.661	60.089	34.086	1.00	59.28	C
ATOM	6222	O	LYS	B	9	8.631	60.659	32.990	1.00	57.59	O
ATOM	6223	N	SER	B	10	8.974	58.805	34.211	1.00	58.73	N
ATOM	6225	CA	SER	B	10	9.357	57.968	33.073	1.00	61.81	C
ATOM	6227	CB	SER	B	10	9.764	56.630	33.631	1.00	62.78	C
ATOM	6230	OG	SER	B	10	8.858	56.310	34.679	1.00	64.36	O
ATOM	6232	C	SER	B	10	8.256	57.723	32.029	1.00	62.89	C
ATOM	6233	O	SER	B	10	8.509	57.692	30.820	1.00	63.54	O
ATOM	6234	N	GLY	B	11	7.034	57.522	32.497	1.00	60.46	N
ATOM	6236	CA	GLY	B	11	5.913	57.328	31.607	1.00	57.59	C
ATOM	6239	C	GLY	B	11	5.615	58.594	30.850	1.00	56.83	C
ATOM	6240	O	GLY	B	11	5.172	58.582	29.710	1.00	59.77	O
ATOM	6241	N	GLN	B	12	5.855	59.731	31.456	1.00	57.32	N
ATOM	6243	CA	GLN	B	12	5.495	60.920	30.714	1.00	58.21	C
ATOM	6245	CB	GLN	B	12	4.324	61.552	31.404	1.00	60.77	C
ATOM	6248	CG	GLN	B	12	3.241	60.485	31.587	1.00	61.87	C
ATOM	6251	CD	GLN	B	12	1.931	61.070	31.972	1.00	63.35	C
ATOM	6252	OE1	GLN	B	12	1.866	61.968	32.838	1.00	64.47	O
ATOM	6253	NE2	GLN	B	12	0.862	60.578	31.346	1.00	65.23	N
ATOM	6256	C	GLN	B	12	6.566	61.922	30.368	1.00	57.52	C
ATOM	6257	O	GLN	B	12	6.322	62.740	29.514	1.00	55.14	O
ATOM	6258	N	GLY	B	13	7.747	61.848	30.973	1.00	55.44	N
ATOM	6260	CA	GLY	B	13	8.778	62.837	30.689	1.00	52.72	C
ATOM	6263	C	GLY	B	13	9.039	63.777	31.852	1.00	51.10	C
ATOM	6264	O	GLY	B	13	8.229	63.885	32.783	1.00	47.37	O
ATOM	6265	N	TYR	B	14	10.180	64.450	31.775	1.00	47.23	N
ATOM	6267	CA	TYR	B	14	10.685	65.341	32.818	1.00	48.86	C
ATOM	6269	CB	TYR	B	14	12.079	64.874	33.266	1.00	47.74	C
ATOM	6272	CG	TYR	B	14	12.061	63.570	34.037	1.00	45.03	C
ATOM	6273	CD1	TYR	B	14	12.346	62.368	33.443	1.00	45.11	C
ATOM	6275	CE1	TYR	B	14	12.314	61.184	34.204	1.00	44.50	C
ATOM	6277	CZ	TYR	B	14	11.978	61.258	35.556	1.00	45.22	C
ATOM	6278	OH	TYR	B	14	11.908	60.155	36.388	1.00	45.51	O

ATOM	6280	CE2	TYR	B	14	11.702	62.446	36.117	1.00	37.21	C
ATOM	6282	CD2	TYR	B	14	11.741	63.566	35.378	1.00	43.77	C
ATOM	6284	C	TYR	B	14	10.776	66.739	32.217	1.00	49.55	C
ATOM	6285	O	TYR	B	14	11.293	66.888	31.111	1.00	52.45	O
ATOM	6286	N	TYR	B	15	10.286	67.759	32.924	1.00	45.83	N
ATOM	6288	CA	TYR	B	15	10.233	69.079	32.339	1.00	39.66	C
ATOM	6290	CB	TYR	B	15	8.817	69.345	31.844	1.00	39.42	C
ATOM	6293	CG	TYR	B	15	7.835	69.394	32.978	1.00	40.57	C
ATOM	6294	CD1	TYR	B	15	7.743	70.510	33.798	1.00	43.59	C
ATOM	6296	CE1	TYR	B	15	6.869	70.561	34.824	1.00	34.88	C
ATOM	6298	CZ	TYR	B	15	6.065	69.496	35.062	1.00	37.24	C
ATOM	6299	OH	TYR	B	15	5.168	69.511	36.110	1.00	47.03	O
ATOM	6301	CE2	TYR	B	15	6.130	68.390	34.273	1.00	41.16	C
ATOM	6303	CD2	TYR	B	15	7.008	68.340	33.240	1.00	42.00	C
ATOM	6305	C	TYR	B	15	10.686	70.194	33.276	1.00	40.31	C
ATOM	6306	O	TYR	B	15	10.679	70.062	34.478	1.00	37.96	O
ATOM	6307	N	VAL	B	16	11.069	71.312	32.676	1.00	43.44	N
ATOM	6309	CA	VAL	B	16	11.673	72.427	33.369	1.00	42.50	C
ATOM	6311	CB	VAL	B	16	13.141	72.669	32.925	1.00	40.97	C
ATOM	6313	CG1	VAL	B	16	13.240	73.090	31.465	1.00	36.56	C
ATOM	6317	CG2	VAL	B	16	13.724	73.752	33.699	1.00	45.84	C
ATOM	6321	C	VAL	B	16	10.836	73.605	32.964	1.00	46.17	C
ATOM	6322	O	VAL	B	16	10.405	73.700	31.818	1.00	44.78	O
ATOM	6323	N	GLU	B	17	10.609	74.497	33.910	1.00	47.27	N
ATOM	6325	CA	GLU	B	17	9.788	75.649	33.701	1.00	48.45	C
ATOM	6327	CB	GLU	B	17	9.314	76.118	35.056	1.00	50.22	C
ATOM	6330	CG	GLU	B	17	8.748	77.518	35.050	1.00	49.63	C
ATOM	6333	CD	GLU	B	17	8.451	78.008	36.443	1.00	52.98	C
ATOM	6334	OE1	GLU	B	17	7.420	77.598	37.020	1.00	56.17	O
ATOM	6335	OE2	GLU	B	17	9.251	78.812	36.957	1.00	62.26	O
ATOM	6336	C	GLU	B	17	10.587	76.771	33.070	1.00	49.62	C
ATOM	6337	O	GLU	B	17	11.605	77.156	33.603	1.00	58.28	O
ATOM	6338	N	MET	B	18	10.130	77.308	31.949	1.00	52.00	N
ATOM	6340	CA	MET	B	18	10.821	78.430	31.301	1.00	52.60	C
ATOM	6342	CB	MET	B	18	11.435	77.960	29.976	1.00	52.70	C
ATOM	6345	CG	MET	B	18	12.598	77.016	30.128	1.00	55.57	C
ATOM	6348	SD	MET	B	18	13.010	76.172	28.583	1.00	59.46	S
ATOM	6349	CE	MET	B	18	14.275	77.236	27.930	1.00	52.14	C
ATOM	6353	C	MET	B	18	9.874	79.625	31.035	1.00	50.66	C
ATOM	6354	O	MET	B	18	8.647	79.496	31.067	1.00	49.38	O
ATOM	6355	N	THR	B	19	10.452	80.786	30.780	1.00	49.10	N
ATOM	6357	CA	THR	B	19	9.650	81.918	30.382	1.00	51.16	C
ATOM	6359	CB	THR	B	19	9.716	83.092	31.355	1.00	50.92	C
ATOM	6361	OG1	THR	B	19	10.956	83.832	31.217	1.00	46.48	O
ATOM	6363	CG2	THR	B	19	9.658	82.591	32.767	1.00	52.58	C
ATOM	6367	C	THR	B	19	10.084	82.426	29.041	1.00	55.56	C
ATOM	6368	O	THR	B	19	11.269	82.597	28.768	1.00	55.44	O
ATOM	6369	N	VAL	B	20	9.090	82.685	28.214	1.00	57.24	N
ATOM	6371	CA	VAL	B	20	9.307	83.161	26.880	1.00	54.55	C
ATOM	6373	CB	VAL	B	20	8.940	82.067	25.827	1.00	54.27	C
ATOM	6375	CG1	VAL	B	20	9.851	80.829	25.982	1.00	54.44	C
ATOM	6379	CG2	VAL	B	20	7.504	81.630	25.953	1.00	55.00	C
ATOM	6383	C	VAL	B	20	8.377	84.325	26.771	1.00	55.62	C
ATOM	6384	O	VAL	B	20	7.234	84.209	27.224	1.00	55.85	O
ATOM	6385	N	GLY	B	21	8.875	85.444	26.223	1.00	56.40	N
ATOM	6387	CA	GLY	B	21	8.066	86.620	25.916	1.00	54.12	C
ATOM	6390	C	GLY	B	21	8.292	87.912	26.694	1.00	52.80	C

ATOM	6391	O	GLY	B	21	8.913	87.910	27.737	1.00	45.49	O
ATOM	6392	N	SER	B	22	7.772	89.020	26.147	1.00	52.16	N
ATOM	6394	CA	SER	B	22	7.729	90.308	26.811	1.00	45.94	C
ATOM	6396	CB	SER	B	22	8.740	91.218	26.200	1.00	48.74	C
ATOM	6399	OG	SER	B	22	10.028	90.606	26.262	1.00	58.03	O
ATOM	6401	C	SER	B	22	6.328	90.918	26.679	1.00	51.64	C
ATOM	6402	O	SER	B	22	5.916	91.373	25.610	1.00	48.63	O
ATOM	6403	N	PRO	B	23	5.587	90.895	27.784	1.00	51.99	N
ATOM	6404	CA	PRO	B	23	6.088	90.276	29.019	1.00	51.30	C
ATOM	6406	CB	PRO	B	23	4.902	90.437	29.964	1.00	54.52	C
ATOM	6409	CG	PRO	B	23	3.759	90.424	29.043	1.00	50.06	C
ATOM	6412	CD	PRO	B	23	4.226	91.436	27.979	1.00	49.63	C
ATOM	6415	C	PRO	B	23	6.368	88.800	28.881	1.00	47.00	C
ATOM	6416	O	PRO	B	23	5.860	88.229	27.944	1.00	48.90	O
ATOM	6417	N	PRO	B	24	7.169	88.249	29.794	1.00	53.61	N
ATOM	6418	CA	PRO	B	24	7.415	86.787	30.020	1.00	54.15	C
ATOM	6420	CB	PRO	B	24	8.155	86.804	31.345	1.00	51.32	C
ATOM	6423	CG	PRO	B	24	8.902	88.094	31.318	1.00	50.72	C
ATOM	6426	CD	PRO	B	24	7.995	89.088	30.680	1.00	53.02	C
ATOM	6429	C	PRO	B	24	6.260	85.781	30.261	1.00	55.63	C
ATOM	6430	O	PRO	B	24	5.567	85.900	31.270	1.00	54.27	O
ATOM	6431	N	GLN	B	25	6.097	84.775	29.392	1.00	57.58	N
ATOM	6433	CA	GLN	B	25	5.025	83.775	29.524	1.00	56.58	C
ATOM	6435	CB	GLN	B	25	4.404	83.453	28.153	1.00	58.02	C
ATOM	6438	CG	GLN	B	25	3.196	84.297	27.785	1.00	61.35	C
ATOM	6441	CD	GLN	B	25	2.729	84.086	26.353	1.00	63.09	C
ATOM	6442	OE1	GLN	B	25	2.293	82.981	25.990	1.00	69.50	O
ATOM	6443	NE2	GLN	B	25	2.802	85.135	25.543	1.00	54.51	N
ATOM	6446	C	GLN	B	25	5.604	82.496	30.116	1.00	58.86	C
ATOM	6447	O	GLN	B	25	6.574	81.987	29.559	1.00	57.53	O
ATOM	6448	N	THR	B	26	5.036	82.000	31.228	1.00	52.25	N
ATOM	6450	CA	THR	B	26	5.497	80.785	31.866	1.00	49.89	C
ATOM	6452	CB	THR	B	26	5.043	80.761	33.304	1.00	51.53	C
ATOM	6454	OG1	THR	B	26	5.882	81.592	34.127	1.00	48.51	O
ATOM	6456	CG2	THR	B	26	5.233	79.353	33.886	1.00	49.37	C
ATOM	6460	C	THR	B	26	4.970	79.505	31.224	1.00	51.74	C
ATOM	6461	O	THR	B	26	3.772	79.321	31.123	1.00	55.36	O
ATOM	6462	N	LEU	B	27	5.861	78.603	30.808	1.00	52.47	N
ATOM	6464	CA	LEU	B	27	5.440	77.291	30.296	1.00	52.98	C
ATOM	6466	CB	LEU	B	27	5.447	77.292	28.768	1.00	53.80	C
ATOM	6469	CG	LEU	B	27	4.766	78.485	28.088	1.00	55.67	C
ATOM	6471	CD1	LEU	B	27	5.163	78.522	26.640	1.00	52.91	C
ATOM	6475	CD2	LEU	B	27	3.248	78.447	28.216	1.00	52.46	C
ATOM	6479	C	LEU	B	27	6.344	76.152	30.825	1.00	54.38	C
ATOM	6480	O	LEU	B	27	7.492	76.415	31.190	1.00	55.85	O
ATOM	6481	N	ASN	B	28	5.809	74.922	30.863	1.00	51.66	N
ATOM	6483	CA	ASN	B	28	6.518	73.711	31.292	1.00	55.85	C
ATOM	6485	CB	ASN	B	28	5.526	72.700	31.940	1.00	58.80	C
ATOM	6488	CG	ASN	B	28	5.260	72.950	33.449	1.00	57.89	C
ATOM	6489	OD1	ASN	B	28	4.145	72.685	33.961	1.00	43.49	O
ATOM	6490	ND2	ASN	B	28	6.273	73.440	34.152	1.00	52.67	N
ATOM	6493	C	ASN	B	28	7.119	73.035	30.037	1.00	54.00	C
ATOM	6494	O	ASN	B	28	6.411	72.858	29.040	1.00	55.20	O
ATOM	6495	N	ILE	B	29	8.385	72.602	30.082	1.00	49.11	N
ATOM	6497	CA	ILE	B	29	9.090	72.101	28.877	1.00	41.75	C
ATOM	6499	CB	ILE	B	29	10.096	73.201	28.430	1.00	41.61	C
ATOM	6501	CG1	ILE	B	29	9.403	74.521	28.502	1.00	36.87	C

ATOM	6504	CD1	ILE	B	29	8.620	74.882	27.272	1.00	35.29	C
ATOM	6508	CG2	ILE	B	29	10.627	72.989	27.001	1.00	45.92	C
ATOM	6512	C	ILE	B	29	9.834	70.738	29.020	1.00	41.21	C
ATOM	6513	O	ILE	B	29	10.821	70.657	29.735	1.00	40.42	O
ATOM	6514	N	LEU	B	30	9.363	69.679	28.344	1.00	40.94	N
ATOM	6516	CA	LEU	B	30	10.056	68.371	28.308	1.00	42.00	C
ATOM	6518	CB	LEU	B	30	9.450	67.507	27.215	1.00	41.64	C
ATOM	6521	CG	LEU	B	30	9.943	66.065	27.050	1.00	41.51	C
ATOM	6523	CD1	LEU	B	30	8.966	65.054	27.427	1.00	38.45	C
ATOM	6527	CD2	LEU	B	30	10.258	65.805	25.617	1.00	51.30	C
ATOM	6531	C	LEU	B	30	11.529	68.607	27.974	1.00	46.49	C
ATOM	6532	O	LEU	B	30	11.849	69.519	27.220	1.00	47.11	O
ATOM	6533	N	VAL	B	31	12.414	67.781	28.527	1.00	46.41	N
ATOM	6535	CA	VAL	B	31	13.858	67.880	28.288	1.00	47.73	C
ATOM	6537	CB	VAL	B	31	14.633	67.834	29.620	1.00	48.19	C
ATOM	6539	CG1	VAL	B	31	16.047	67.314	29.431	1.00	52.74	C
ATOM	6543	CG2	VAL	B	31	14.661	69.187	30.226	1.00	47.82	C
ATOM	6547	C	VAL	B	31	14.251	66.709	27.422	1.00	49.66	C
ATOM	6548	O	VAL	B	31	14.369	65.614	27.935	1.00	50.43	O
ATOM	6549	N	ASP	B	32	14.488	66.937	26.122	1.00	50.95	N
ATOM	6551	CA	ASP	B	32	14.599	65.825	25.165	1.00	50.66	C
ATOM	6553	CB	ASP	B	32	13.547	66.011	24.085	1.00	46.26	C
ATOM	6556	CG	ASP	B	32	13.417	64.802	23.209	1.00	46.83	C
ATOM	6557	OD1	ASP	B	32	12.601	63.952	23.614	1.00	57.65	O
ATOM	6558	OD2	ASP	B	32	14.037	64.597	22.118	1.00	28.18	O
ATOM	6559	C	ASP	B	32	15.937	65.627	24.483	1.00	50.93	C
ATOM	6560	O	ASP	B	32	16.137	66.095	23.372	1.00	56.78	O
ATOM	6561	N	THR	B	33	16.854	64.901	25.091	1.00	44.66	N
ATOM	6563	CA	THR	B	33	18.135	64.814	24.467	1.00	41.11	C
ATOM	6565	CB	THR	B	33	19.151	64.207	25.419	1.00	44.39	C
ATOM	6567	OG1	THR	B	33	18.649	62.989	25.966	1.00	47.50	O
ATOM	6569	CG2	THR	B	33	19.298	65.077	26.643	1.00	45.76	C
ATOM	6573	C	THR	B	33	18.075	64.056	23.159	1.00	43.39	C
ATOM	6574	O	THR	B	33	19.101	63.882	22.521	1.00	45.31	O
ATOM	6575	N	GLY	B	34	16.891	63.610	22.749	1.00	43.77	N
ATOM	6577	CA	GLY	B	34	16.739	62.822	21.528	1.00	46.99	C
ATOM	6580	C	GLY	B	34	16.380	63.629	20.282	1.00	49.16	C
ATOM	6581	O	GLY	B	34	16.324	63.093	19.151	1.00	50.21	O
ATOM	6582	N	SER	B	35	16.151	64.924	20.486	1.00	50.26	N
ATOM	6584	CA	SER	B	35	15.776	65.838	19.394	1.00	47.28	C
ATOM	6586	CB	SER	B	35	14.281	66.025	19.398	1.00	43.53	C
ATOM	6589	OG	SER	B	35	13.916	66.661	20.582	1.00	41.18	O
ATOM	6591	C	SER	B	35	16.491	67.207	19.504	1.00	43.05	C
ATOM	6592	O	SER	B	35	17.273	67.446	20.440	1.00	43.12	O
ATOM	6593	N	SER	B	36	16.238	68.094	18.549	1.00	37.14	N
ATOM	6595	CA	SER	B	36	16.982	69.332	18.512	1.00	36.80	C
ATOM	6597	CB	SER	B	36	18.137	69.180	17.502	1.00	40.35	C
ATOM	6600	OG	SER	B	36	19.229	68.365	18.021	1.00	36.18	O
ATOM	6602	C	SER	B	36	16.182	70.629	18.297	1.00	42.36	C
ATOM	6603	O	SER	B	36	16.739	71.718	18.339	1.00	49.70	O
ATOM	6604	N	ASN	B	37	14.879	70.560	18.107	1.00	45.23	N
ATOM	6606	CA	ASN	B	37	14.135	71.783	17.906	1.00	44.85	C
ATOM	6608	CB	ASN	B	37	13.080	71.617	16.845	1.00	43.43	C
ATOM	6611	CG	ASN	B	37	13.659	71.592	15.492	1.00	49.01	C
ATOM	6612	OD1	ASN	B	37	14.303	70.615	15.126	1.00	53.37	O
ATOM	6613	ND2	ASN	B	37	13.450	72.678	14.715	1.00	47.23	N
ATOM	6616	C	ASN	B	37	13.432	72.151	19.164	1.00	43.89	C

ATOM	6617	O	ASN	B	37	12.955	71.279	19.843	1.00	48.92	O
ATOM	6618	N	PHE	B	38	13.379	73.447	19.454	1.00	39.62	N
ATOM	6620	CA	PHE	B	38	12.666	73.984	20.588	1.00	37.09	C
ATOM	6622	CB	PHE	B	38	13.518	75.084	21.189	1.00	34.12	C
ATOM	6625	CG	PHE	B	38	12.915	75.809	22.291	1.00	36.88	C
ATOM	6626	CD1	PHE	B	38	13.190	77.128	22.451	1.00	43.04	C
ATOM	6628	CE1	PHE	B	38	12.639	77.847	23.480	1.00	43.52	C
ATOM	6630	CZ	PHE	B	38	11.810	77.261	24.366	1.00	45.02	C
ATOM	6632	CE2	PHE	B	38	11.519	75.950	24.235	1.00	51.64	C
ATOM	6634	CD2	PHE	B	38	12.082	75.213	23.185	1.00	52.30	C
ATOM	6636	C	PHE	B	38	11.313	74.445	20.010	1.00	40.81	C
ATOM	6637	O	PHE	B	38	11.241	75.206	19.018	1.00	42.46	O
ATOM	6638	N	ALA	B	39	10.238	73.940	20.607	1.00	40.42	N
ATOM	6640	CA	ALA	B	39	8.903	74.198	20.105	1.00	44.90	C
ATOM	6642	CB	ALA	B	39	8.473	73.061	19.113	1.00	45.36	C
ATOM	6646	C	ALA	B	39	7.889	74.308	21.212	1.00	41.28	C
ATOM	6647	O	ALA	B	39	7.961	73.617	22.213	1.00	44.60	O
ATOM	6648	N	VAL	B	40	6.929	75.177	21.046	1.00	40.49	N
ATOM	6650	CA	VAL	B	40	5.885	75.186	22.027	1.00	49.83	C
ATOM	6652	CB	VAL	B	40	6.020	76.354	22.997	1.00	49.55	C
ATOM	6654	CG1	VAL	B	40	7.345	76.332	23.631	1.00	46.17	C
ATOM	6658	CG2	VAL	B	40	5.830	77.657	22.280	1.00	54.69	C
ATOM	6662	C	VAL	B	40	4.496	75.202	21.404	1.00	51.60	C
ATOM	6663	O	VAL	B	40	4.209	75.904	20.435	1.00	56.20	O
ATOM	6664	N	GLY	B	41	3.629	74.394	21.958	1.00	50.81	N
ATOM	6666	CA	GLY	B	41	2.235	74.528	21.608	1.00	54.35	C
ATOM	6669	C	GLY	B	41	1.861	76.000	21.658	1.00	54.27	C
ATOM	6670	O	GLY	B	41	2.139	76.715	22.646	1.00	50.40	O
ATOM	6671	N	ALA	B	42	1.208	76.439	20.585	1.00	55.45	N
ATOM	6673	CA	ALA	B	42	0.864	77.840	20.394	1.00	57.72	C
ATOM	6675	CB	ALA	B	42	1.661	78.375	19.208	1.00	61.49	C
ATOM	6679	C	ALA	B	42	-0.620	78.089	20.158	1.00	59.93	C
ATOM	6680	O	ALA	B	42	-1.041	79.239	19.956	1.00	54.51	O
ATOM	6681	N	ALA	B	43	-1.422	77.028	20.205	1.00	59.25	N
ATOM	6683	CA	ALA	B	43	-2.838	77.148	19.904	1.00	58.08	C
ATOM	6685	CB	ALA	B	43	-3.069	76.951	18.403	1.00	57.09	C
ATOM	6689	C	ALA	B	43	-3.577	76.084	20.669	1.00	57.28	C
ATOM	6690	O	ALA	B	43	-3.047	75.011	20.869	1.00	57.71	O
ATOM	6691	N	PRO	B	44	-4.809	76.358	21.067	1.00	58.13	N
ATOM	6692	CA	PRO	B	44	-5.568	75.407	21.856	1.00	55.97	C
ATOM	6694	CB	PRO	B	44	-7.009	75.819	21.550	1.00	57.92	C
ATOM	6697	CG	PRO	B	44	-6.845	76.827	20.407	1.00	57.30	C
ATOM	6700	CD	PRO	B	44	-5.628	77.554	20.804	1.00	57.17	C
ATOM	6703	C	PRO	B	44	-5.339	74.012	21.388	1.00	55.26	C
ATOM	6704	O	PRO	B	44	-5.058	73.798	20.199	1.00	55.54	O
ATOM	6705	N	HIS	B	45	-5.458	73.083	22.330	1.00	51.68	N
ATOM	6707	CA	HIS	B	45	-5.380	71.662	22.074	1.00	49.63	C
ATOM	6709	CB	HIS	B	45	-3.960	71.199	21.920	1.00	47.73	C
ATOM	6712	CG	HIS	B	45	-3.854	69.743	21.624	1.00	47.10	C
ATOM	6713	ND1	HIS	B	45	-3.661	68.805	22.613	1.00	47.83	N
ATOM	6715	CE1	HIS	B	45	-3.628	67.602	22.062	1.00	48.34	C
ATOM	6717	NE2	HIS	B	45	-3.798	67.728	20.755	1.00	39.59	N
ATOM	6719	CD2	HIS	B	45	-3.932	69.058	20.454	1.00	37.38	C
ATOM	6721	C	HIS	B	45	-5.990	71.052	23.311	1.00	54.88	C
ATOM	6722	O	HIS	B	45	-5.850	71.599	24.387	1.00	61.00	O
ATOM	6723	N	PRO	B	46	-6.670	69.930	23.205	1.00	58.61	N
ATOM	6724	CA	PRO	B	46	-7.391	69.427	24.372	1.00	58.25	C

ATOM	6726	CB	PRO	B	46	-8.093	68.157	23.840	1.00	56.69	C
ATOM	6729	CG	PRO	B	46	-8.000	68.181	22.353	1.00	55.11	C
ATOM	6732	CD	PRO	B	46	-6.815	69.046	22.032	1.00	60.22	C
ATOM	6735	C	PRO	B	46	-6.491	69.075	25.575	1.00	57.99	C
ATOM	6736	O	PRO	B	46	-6.953	68.992	26.716	1.00	56.13	O
ATOM	6737	N	PHE	B	47	-5.206	68.871	25.356	1.00	55.88	N
ATOM	6739	CA	PHE	B	47	-4.396	68.376	26.470	1.00	51.81	C
ATOM	6741	CB	PHE	B	47	-3.499	67.274	25.982	1.00	44.88	C
ATOM	6744	CG	PHE	B	47	-4.234	66.044	25.604	1.00	46.77	C
ATOM	6745	CD1	PHE	B	47	-3.640	65.093	24.782	1.00	49.70	C
ATOM	6747	CE1	PHE	B	47	-4.315	63.949	24.429	1.00	48.35	C
ATOM	6749	CZ	PHE	B	47	-5.596	63.746	24.901	1.00	43.45	C
ATOM	6751	CE2	PHE	B	47	-6.205	64.682	25.729	1.00	36.92	C
ATOM	6753	CD2	PHE	B	47	-5.530	65.822	26.070	1.00	43.75	C
ATOM	6755	C	PHE	B	47	-3.532	69.385	27.152	1.00	53.07	C
ATOM	6756	O	PHE	B	47	-2.763	69.015	28.046	1.00	56.38	O
ATOM	6757	N	LEU	B	48	-3.661	70.647	26.760	1.00	48.06	N
ATOM	6759	CA	LEU	B	48	-2.719	71.620	27.207	1.00	49.14	C
ATOM	6761	CB	LEU	B	48	-2.107	72.333	26.014	1.00	50.40	C
ATOM	6764	CG	LEU	B	48	-1.214	71.667	24.990	1.00	47.31	C
ATOM	6766	CD1	LEU	B	48	-1.252	72.578	23.755	1.00	47.58	C
ATOM	6770	CD2	LEU	B	48	0.179	71.567	25.528	1.00	48.26	C
ATOM	6774	C	LEU	B	48	-3.453	72.636	27.955	1.00	53.07	C
ATOM	6775	O	LEU	B	48	-4.383	73.194	27.396	1.00	55.21	O
ATOM	6776	N	HIS	B	49	-3.033	72.940	29.181	1.00	57.93	N
ATOM	6778	CA	HIS	B	49	-3.757	73.897	30.015	1.00	56.76	C
ATOM	6780	CB	HIS	B	49	-3.451	73.706	31.497	1.00	61.80	C
ATOM	6783	CG	HIS	B	49	-4.070	72.466	32.048	1.00	67.51	C
ATOM	6784	ND1	HIS	B	49	-5.274	71.984	31.583	1.00	65.77	N
ATOM	6786	CE1	HIS	B	49	-5.579	70.872	32.226	1.00	68.88	C
ATOM	6788	NE2	HIS	B	49	-4.615	70.615	33.092	1.00	72.14	N
ATOM	6790	CD2	HIS	B	49	-3.654	71.596	32.999	1.00	70.39	C
ATOM	6792	C	HIS	B	49	-3.484	75.276	29.617	1.00	55.32	C
ATOM	6793	O	HIS	B	49	-4.365	76.100	29.747	1.00	54.19	O
ATOM	6794	N	ARG	B	50	-2.278	75.563	29.139	1.00	57.08	N
ATOM	6796	CA	ARG	B	50	-1.920	76.933	28.702	1.00	52.78	C
ATOM	6798	CB	ARG	B	50	-1.133	77.660	29.796	1.00	48.76	C
ATOM	6801	CG	ARG	B	50	-0.218	76.713	30.591	1.00	53.36	C
ATOM	6804	CD	ARG	B	50	0.743	77.384	31.593	1.00	54.71	C
ATOM	6807	NE	ARG	B	50	1.853	76.474	31.868	1.00	61.19	N
ATOM	6809	CZ	ARG	B	50	2.737	76.603	32.838	1.00	59.08	C
ATOM	6810	NH1	ARG	B	50	2.693	77.609	33.688	1.00	60.26	N
ATOM	6813	NH2	ARG	B	50	3.681	75.703	32.952	1.00	66.01	N
ATOM	6816	C	ARG	B	50	-1.078	76.790	27.438	1.00	54.68	C
ATOM	6817	O	ARG	B	50	-0.699	75.669	27.081	1.00	57.99	O
ATOM	6818	N	TYR	B	51	-0.791	77.896	26.746	1.00	55.14	N
ATOM	6820	CA	TYR	B	51	0.040	77.836	25.534	1.00	51.39	C
ATOM	6822	CB	TYR	B	51	-0.692	77.265	24.296	1.00	52.11	C
ATOM	6825	CG	TYR	B	51	-1.939	77.986	23.819	1.00	50.59	C
ATOM	6826	CD1	TYR	B	51	-1.872	79.145	23.080	1.00	53.23	C
ATOM	6828	CE1	TYR	B	51	-3.007	79.776	22.659	1.00	54.06	C
ATOM	6830	CZ	TYR	B	51	-4.238	79.243	22.977	1.00	56.68	C
ATOM	6831	OH	TYR	B	51	-5.428	79.833	22.574	1.00	55.76	O
ATOM	6833	CE2	TYR	B	51	-4.311	78.099	23.699	1.00	56.57	C
ATOM	6835	CD2	TYR	B	51	-3.178	77.485	24.107	1.00	55.59	C
ATOM	6837	C	TYR	B	51	0.654	79.155	25.198	1.00	49.19	C
ATOM	6838	O	TYR	B	51	0.394	80.160	25.825	1.00	48.94	O

ATOM	6839	N	TYR	B	52	1.503	79.151	24.193	1.00	47.59	N
ATOM	6841	CA	TYR	B	52	2.182	80.378	23.852	1.00	50.52	C
ATOM	6843	CB	TYR	B	52	3.496	80.019	23.199	1.00	44.85	C
ATOM	6846	CG	TYR	B	52	4.382	81.161	22.853	1.00	43.08	C
ATOM	6847	CD1	TYR	B	52	4.498	82.273	23.656	1.00	45.53	C
ATOM	6849	CE1	TYR	B	52	5.355	83.314	23.297	1.00	43.96	C
ATOM	6851	CZ	TYR	B	52	6.080	83.202	22.134	1.00	41.86	C
ATOM	6852	OH	TYR	B	52	6.952	84.165	21.695	1.00	54.44	O
ATOM	6854	CE2	TYR	B	52	5.969	82.123	21.357	1.00	43.09	C
ATOM	6856	CD2	TYR	B	52	5.138	81.113	21.705	1.00	46.61	C
ATOM	6858	C	TYR	B	52	1.327	81.241	22.914	1.00	53.39	C
ATOM	6859	O	TYR	B	52	0.897	80.763	21.840	1.00	55.11	O
ATOM	6860	N	GLN	B	53	1.066	82.488	23.312	1.00	49.66	N
ATOM	6862	CA	GLN	B	53	0.350	83.402	22.424	1.00	53.39	C
ATOM	6864	CB	GLN	B	53	-0.928	83.978	23.029	1.00	57.67	C
ATOM	6867	CG	GLN	B	53	-1.673	83.154	24.073	1.00	58.49	C
ATOM	6870	CD	GLN	B	53	-2.674	84.056	24.766	1.00	63.66	C
ATOM	6871	OE1	GLN	B	53	-2.341	84.707	25.784	1.00	62.18	O
ATOM	6872	NE2	GLN	B	53	-3.891	84.146	24.200	1.00	60.51	N
ATOM	6875	C	GLN	B	53	1.254	84.569	21.988	1.00	54.38	C
ATOM	6876	O	GLN	B	53	1.569	85.510	22.750	1.00	49.25	O
ATOM	6877	N	ARG	B	54	1.657	84.494	20.735	1.00	50.22	N
ATOM	6879	CA	ARG	B	54	2.547	85.458	20.202	1.00	45.95	C
ATOM	6881	CB	ARG	B	54	2.907	85.045	18.778	1.00	45.10	C
ATOM	6884	CG	ARG	B	54	3.655	83.672	18.783	1.00	39.53	C
ATOM	6887	CD	ARG	B	54	3.679	82.890	17.474	1.00	42.75	C
ATOM	6890	NE	ARG	B	54	2.387	82.353	17.079	1.00	47.37	N
ATOM	6892	CZ	ARG	B	54	2.139	81.788	15.910	1.00	45.51	C
ATOM	6893	NH1	ARG	B	54	3.100	81.680	15.024	1.00	51.53	N
ATOM	6896	NH2	ARG	B	54	0.931	81.330	15.618	1.00	42.27	N
ATOM	6899	C	ARG	B	54	1.939	86.836	20.386	1.00	52.82	C
ATOM	6900	O	ARG	B	54	2.439	87.560	21.225	1.00	59.82	O
ATOM	6901	N	GLN	B	55	0.855	87.196	19.686	1.00	57.85	N
ATOM	6903	CA	GLN	B	55	0.303	88.572	19.736	1.00	57.16	C
ATOM	6905	CB	GLN	B	55	-1.194	88.640	19.347	1.00	62.44	C
ATOM	6908	CG	GLN	B	55	-1.469	88.563	17.810	1.00	70.53	C
ATOM	6911	CD	GLN	B	55	-2.978	88.687	17.382	1.00	79.43	C
ATOM	6912	OE1	GLN	B	55	-3.369	89.660	16.701	1.00	80.66	O
ATOM	6913	NE2	GLN	B	55	-3.802	87.692	17.764	1.00	79.42	N
ATOM	6916	C	GLN	B	55	0.533	89.312	21.058	1.00	57.92	C
ATOM	6917	O	GLN	B	55	0.360	90.526	21.117	1.00	56.14	O
ATOM	6918	N	LEU	B	56	0.930	88.622	22.121	1.00	55.89	N
ATOM	6920	CA	LEU	B	56	1.213	89.336	23.370	1.00	58.18	C
ATOM	6922	CB	LEU	B	56	0.712	88.524	24.540	1.00	60.42	C
ATOM	6925	CG	LEU	B	56	-0.721	88.029	24.402	1.00	62.37	C
ATOM	6927	CD1	LEU	B	56	-1.296	87.699	25.797	1.00	63.41	C
ATOM	6931	CD2	LEU	B	56	-1.598	89.054	23.676	1.00	62.35	C
ATOM	6935	C	LEU	B	56	2.666	89.723	23.690	1.00	60.41	C
ATOM	6936	O	LEU	B	56	2.861	90.367	24.719	1.00	60.04	O
ATOM	6937	N	SER	B	57	3.663	89.348	22.857	1.00	57.76	N
ATOM	6939	CA	SER	B	57	5.071	89.701	23.116	1.00	54.64	C
ATOM	6941	CB	SER	B	57	5.991	88.475	23.117	1.00	56.81	C
ATOM	6944	OG	SER	B	57	7.344	88.844	23.423	1.00	54.08	O
ATOM	6946	C	SER	B	57	5.661	90.710	22.153	1.00	53.95	C
ATOM	6947	O	SER	B	57	5.658	90.533	20.942	1.00	55.46	O
ATOM	6948	N	SER	B	58	6.218	91.755	22.738	1.00	52.39	N
ATOM	6950	CA	SER	B	58	6.758	92.873	22.011	1.00	46.14	C

ATOM	6952	CB	SER	B	58	6.820	94.070	22.947	1.00	47.29	C
ATOM	6955	OG	SER	B	58	7.567	93.825	24.116	1.00	47.06	O
ATOM	6957	C	SER	B	58	8.114	92.536	21.420	1.00	47.84	C
ATOM	6958	O	SER	B	58	8.576	93.177	20.478	1.00	47.48	O
ATOM	6959	N	THR	B	59	8.747	91.510	21.965	1.00	48.33	N
ATOM	6961	CA	THR	B	59	10.006	91.008	21.429	1.00	42.92	C
ATOM	6963	CB	THR	B	59	10.885	90.549	22.559	1.00	42.65	C
ATOM	6965	OG1	THR	B	59	10.128	89.795	23.523	1.00	49.24	O
ATOM	6967	CG2	THR	B	59	11.359	91.709	23.347	1.00	45.57	C
ATOM	6971	C	THR	B	59	9.812	89.853	20.405	1.00	45.53	C
ATOM	6972	O	THR	B	59	10.800	89.319	19.883	1.00	42.19	O
ATOM	6973	N	TYR	B	60	8.566	89.465	20.113	1.00	44.25	N
ATOM	6975	CA	TYR	B	60	8.312	88.440	19.089	1.00	42.52	C
ATOM	6977	CB	TYR	B	60	6.854	88.060	19.079	1.00	42.61	C
ATOM	6980	CG	TYR	B	60	6.444	87.188	17.912	1.00	39.56	C
ATOM	6981	CD1	TYR	B	60	6.853	85.902	17.825	1.00	39.91	C
ATOM	6983	CE1	TYR	B	60	6.478	85.088	16.766	1.00	37.80	C
ATOM	6985	CZ	TYR	B	60	5.693	85.576	15.787	1.00	41.24	C
ATOM	6986	OH	TYR	B	60	5.341	84.743	14.726	1.00	49.70	O
ATOM	6988	CE2	TYR	B	60	5.263	86.875	15.855	1.00	38.20	C
ATOM	6990	CD2	TYR	B	60	5.636	87.661	16.909	1.00	40.65	C
ATOM	6992	C	TYR	B	60	8.593	88.944	17.691	1.00	47.70	C
ATOM	6993	O	TYR	B	60	8.100	89.986	17.310	1.00	45.23	O
ATOM	6994	N	ARG	B	61	9.376	88.195	16.913	1.00	53.11	N
ATOM	6996	CA	ARG	B	61	9.536	88.482	15.488	1.00	47.96	C
ATOM	6998	CB	ARG	B	61	10.866	89.084	15.173	1.00	48.51	C
ATOM	7001	CG	ARG	B	61	11.328	90.014	16.186	1.00	47.51	C
ATOM	7004	CD	ARG	B	61	12.777	90.163	16.129	1.00	46.49	C
ATOM	7007	NE	ARG	B	61	13.175	91.480	16.568	1.00	53.97	N
ATOM	7009	CZ	ARG	B	61	14.425	91.808	16.746	1.00	57.00	C
ATOM	7010	NH1	ARG	B	61	15.338	90.893	16.529	1.00	62.31	N
ATOM	7013	NH2	ARG	B	61	14.778	93.015	17.141	1.00	55.13	N
ATOM	7016	C	ARG	B	61	9.346	87.181	14.730	1.00	48.27	C
ATOM	7017	O	ARG	B	61	9.609	86.115	15.238	1.00	52.99	O
ATOM	7018	N	ASP	B	62	8.910	87.304	13.496	1.00	44.77	N
ATOM	7020	CA	ASP	B	62	8.336	86.217	12.776	1.00	46.62	C
ATOM	7022	CB	ASP	B	62	6.934	86.722	12.384	1.00	49.17	C
ATOM	7025	CG	ASP	B	62	6.177	85.815	11.468	1.00	53.87	C
ATOM	7026	OD1	ASP	B	62	6.754	84.805	11.004	1.00	55.89	O
ATOM	7027	OD2	ASP	B	62	4.965	86.076	11.152	1.00	54.79	O
ATOM	7028	C	ASP	B	62	9.225	85.892	11.608	1.00	49.58	C
ATOM	7029	O	ASP	B	62	9.620	86.763	10.849	1.00	55.62	O
ATOM	7030	N	LEU	B	63	9.559	84.624	11.453	1.00	45.53	N
ATOM	7032	CA	LEU	B	63	10.464	84.255	10.394	1.00	42.20	C
ATOM	7034	CB	LEU	B	63	11.360	83.083	10.835	1.00	41.42	C
ATOM	7037	CG	LEU	B	63	12.548	83.387	11.771	1.00	34.55	C
ATOM	7039	CD1	LEU	B	63	12.847	82.271	12.775	1.00	36.00	C
ATOM	7043	CD2	LEU	B	63	13.742	83.634	10.972	1.00	36.18	C
ATOM	7047	C	LEU	B	63	9.736	83.913	9.112	1.00	45.11	C
ATOM	7048	O	LEU	B	63	10.388	83.773	8.099	1.00	51.74	O
ATOM	7049	N	ARG	B	64	8.407	83.778	9.132	1.00	45.09	N
ATOM	7051	CA	ARG	B	64	7.627	83.437	7.918	1.00	45.81	C
ATOM	7053	CB	ARG	B	64	7.621	84.590	6.932	1.00	42.03	C
ATOM	7056	CG	ARG	B	64	8.317	85.837	7.448	1.00	48.52	C
ATOM	7059	CD	ARG	B	64	7.647	87.151	7.097	1.00	42.44	C
ATOM	7062	NE	ARG	B	64	8.116	87.704	5.832	1.00	45.11	N
ATOM	7064	CZ	ARG	B	64	9.098	88.601	5.721	1.00	47.61	C

ATOM	7065	NH1	ARG	B	64	9.754	89.057	6.786	1.00	49.17	N
ATOM	7068	NH2	ARG	B	64	9.431	89.044	4.531	1.00	47.35	N
ATOM	7071	C	ARG	B	64	8.161	82.208	7.176	1.00	48.40	C
ATOM	7072	O	ARG	B	64	8.654	82.321	6.041	1.00	50.59	O
ATOM	7073	N	LYS	B	65	8.050	81.058	7.832	1.00	44.70	N
ATOM	7075	CA	LYS	B	65	8.589	79.783	7.378	1.00	42.44	C
ATOM	7077	CB	LYS	B	65	10.110	79.799	7.680	1.00	42.17	C
ATOM	7080	CG	LYS	B	65	11.080	78.794	6.970	1.00	46.99	C
ATOM	7083	CD	LYS	B	65	12.568	78.665	7.710	1.00	41.67	C
ATOM	7086	CE	LYS	B	65	13.207	80.010	8.378	1.00	31.79	C
ATOM	7089	NZ	LYS	B	65	14.690	79.980	8.772	1.00	2.00	N
ATOM	7093	C	LYS	B	65	7.817	78.802	8.271	1.00	40.97	C
ATOM	7094	O	LYS	B	65	7.650	79.069	9.459	1.00	39.90	O
ATOM	7095	N	GLY	B	66	7.299	77.707	7.711	1.00	45.11	N
ATOM	7097	CA	GLY	B	66	6.632	76.656	8.487	1.00	37.19	C
ATOM	7100	C	GLY	B	66	7.643	75.541	8.684	1.00	43.52	C
ATOM	7101	O	GLY	B	66	8.638	75.469	7.970	1.00	43.64	O
ATOM	7102	N	VAL	B	67	7.398	74.674	9.652	1.00	48.15	N
ATOM	7104	CA	VAL	B	67	8.300	73.575	9.969	1.00	47.91	C
ATOM	7106	CB	VAL	B	67	9.347	74.093	10.970	1.00	46.06	C
ATOM	7108	CG1	VAL	B	67	8.684	74.740	12.148	1.00	53.01	C
ATOM	7112	CG2	VAL	B	67	10.242	73.023	11.460	1.00	45.35	C
ATOM	7116	C	VAL	B	67	7.531	72.375	10.546	1.00	48.93	C
ATOM	7117	O	VAL	B	67	6.604	72.553	11.306	1.00	50.43	O
ATOM	7118	N	TYR	B	68	7.920	71.159	10.173	1.00	54.33	N
ATOM	7120	CA	TYR	B	68	7.307	69.912	10.681	1.00	54.23	C
ATOM	7122	CB	TYR	B	68	6.674	69.180	9.496	1.00	58.61	C
ATOM	7125	CG	TYR	B	68	6.194	67.743	9.740	1.00	62.41	C
ATOM	7126	CD1	TYR	B	68	5.151	67.465	10.624	1.00	65.98	C
ATOM	7128	CE1	TYR	B	68	4.709	66.183	10.833	1.00	65.58	C
ATOM	7130	CZ	TYR	B	68	5.303	65.145	10.156	1.00	70.65	C
ATOM	7131	OH	TYR	B	68	4.874	63.855	10.350	1.00	76.70	O
ATOM	7133	CE2	TYR	B	68	6.330	65.379	9.274	1.00	68.48	C
ATOM	7135	CD2	TYR	B	68	6.766	66.677	9.067	1.00	68.01	C
ATOM	7137	C	TYR	B	68	8.354	68.969	11.289	1.00	52.15	C
ATOM	7138	O	TYR	B	68	9.446	68.840	10.735	1.00	51.11	O
ATOM	7139	N	VAL	B	69	8.028	68.308	12.407	1.00	48.81	N
ATOM	7141	CA	VAL	B	69	8.931	67.350	13.043	1.00	41.24	C
ATOM	7143	CB	VAL	B	69	9.433	67.888	14.381	1.00	46.72	C
ATOM	7145	CG1	VAL	B	69	10.525	66.959	14.976	1.00	50.12	C
ATOM	7149	CG2	VAL	B	69	9.951	69.297	14.276	1.00	44.49	C
ATOM	7153	C	VAL	B	69	8.254	66.073	13.454	1.00	42.06	C
ATOM	7154	O	VAL	B	69	7.427	66.130	14.335	1.00	49.53	O
ATOM	7155	N	PRO	B	70	8.562	64.923	12.851	1.00	44.13	N
ATOM	7156	CA	PRO	B	70	8.124	63.637	13.369	1.00	40.92	C
ATOM	7158	CB	PRO	B	70	8.103	62.804	12.106	1.00	42.89	C
ATOM	7161	CG	PRO	B	70	9.343	63.146	11.506	1.00	41.09	C
ATOM	7164	CD	PRO	B	70	9.306	64.697	11.594	1.00	47.61	C
ATOM	7167	C	PRO	B	70	9.149	62.940	14.268	1.00	49.11	C
ATOM	7168	O	PRO	B	70	10.376	62.995	14.009	1.00	49.67	O
ATOM	7169	N	TYR	B	71	8.645	62.251	15.290	1.00	50.47	N
ATOM	7171	CA	TYR	B	71	9.476	61.426	16.149	1.00	53.44	C
ATOM	7173	CB	TYR	B	71	9.170	61.786	17.587	1.00	53.95	C
ATOM	7176	CG	TYR	B	71	9.281	63.268	17.848	1.00	54.07	C
ATOM	7177	CD1	TYR	B	71	10.380	63.799	18.509	1.00	54.07	C
ATOM	7179	CE1	TYR	B	71	10.474	65.154	18.746	1.00	54.76	C
ATOM	7181	CZ	TYR	B	71	9.475	65.989	18.322	1.00	49.10	C

ATOM	7182	OH	TYR	B	71	9.564	67.326	18.547	1.00	49.20	O
ATOM	7184	CE2	TYR	B	71	8.397	65.494	17.673	1.00	52.91	C
ATOM	7186	CD2	TYR	B	71	8.299	64.135	17.437	1.00	55.62	C
ATOM	7188	C	TYR	B	71	9.220	59.920	15.888	1.00	57.24	C
ATOM	7189	O	TYR	B	71	8.666	59.564	14.848	1.00	61.01	O
ATOM	7190	N	THR	B	72	9.633	59.045	16.816	1.00	56.65	N
ATOM	7192	CA	THR	B	72	9.338	57.601	16.757	1.00	49.69	C
ATOM	7194	CB	THR	B	72	10.143	56.812	17.843	1.00	45.99	C
ATOM	7196	OG1	THR	B	72	11.515	56.708	17.485	1.00	41.99	O
ATOM	7198	CG2	THR	B	72	9.736	55.355	17.907	1.00	48.51	C
ATOM	7202	C	THR	B	72	7.843	57.406	17.025	1.00	51.02	C
ATOM	7203	O	THR	B	72	7.208	56.549	16.431	1.00	52.84	O
ATOM	7204	N	GLN	B	73	7.303	58.198	17.946	1.00	48.27	N
ATOM	7206	CA	GLN	B	73	5.875	58.203	18.263	1.00	48.31	C
ATOM	7208	CB	GLN	B	73	5.581	57.409	19.545	1.00	51.35	C
ATOM	7211	CG	GLN	B	73	5.749	55.888	19.423	1.00	56.02	C
ATOM	7214	CD	GLN	B	73	4.857	55.255	18.344	1.00	61.90	C
ATOM	7215	OE1	GLN	B	73	3.792	55.792	18.018	1.00	68.29	O
ATOM	7216	NE2	GLN	B	73	5.295	54.124	17.783	1.00	62.95	N
ATOM	7219	C	GLN	B	73	5.437	59.654	18.470	1.00	49.42	C
ATOM	7220	O	GLN	B	73	5.747	60.278	19.508	1.00	46.54	O
ATOM	7221	N	GLY	B	74	4.722	60.214	17.499	1.00	48.91	N
ATOM	7223	CA	GLY	B	74	4.305	61.606	17.608	1.00	49.47	C
ATOM	7226	C	GLY	B	74	4.933	62.541	16.584	1.00	50.49	C
ATOM	7227	O	GLY	B	74	5.998	62.255	16.005	1.00	50.02	O
ATOM	7228	N	LYS	B	75	4.266	63.674	16.375	1.00	50.53	N
ATOM	7230	CA	LYS	B	75	4.660	64.627	15.342	1.00	52.28	C
ATOM	7232	CB	LYS	B	75	4.490	63.974	13.978	1.00	54.30	C
ATOM	7235	CG	LYS	B	75	3.047	63.970	13.545	1.00	57.04	C
ATOM	7238	CD	LYS	B	75	2.877	63.711	12.065	1.00	62.75	C
ATOM	7241	CE	LYS	B	75	3.286	62.309	11.659	1.00	69.74	C
ATOM	7244	NZ	LYS	B	75	3.245	62.144	10.151	1.00	75.75	N
ATOM	7248	C	LYS	B	75	3.767	65.863	15.374	1.00	48.92	C
ATOM	7249	O	LYS	B	75	2.624	65.773	15.785	1.00	50.04	O
ATOM	7250	N	TRP	B	76	4.288	67.005	14.939	1.00	47.21	N
ATOM	7252	CA	TRP	B	76	3.529	68.264	14.876	1.00	45.93	C
ATOM	7254	CB	TRP	B	76	3.623	69.023	16.212	1.00	44.91	C
ATOM	7257	CG	TRP	B	76	5.006	69.104	16.657	1.00	44.21	C
ATOM	7258	CD1	TRP	B	76	5.635	68.312	17.578	1.00	48.52	C
ATOM	7260	NE1	TRP	B	76	6.950	68.697	17.720	1.00	44.12	N
ATOM	7262	CE2	TRP	B	76	7.190	69.744	16.878	1.00	40.53	C
ATOM	7263	CD2	TRP	B	76	5.985	70.027	16.194	1.00	46.96	C
ATOM	7264	CE3	TRP	B	76	5.967	71.072	15.266	1.00	44.10	C
ATOM	7266	CZ3	TRP	B	76	7.090	71.766	15.055	1.00	33.58	C
ATOM	7268	CH2	TRP	B	76	8.269	71.452	15.754	1.00	44.67	C
ATOM	7270	CZ2	TRP	B	76	8.324	70.442	16.665	1.00	38.84	C
ATOM	7272	C	TRP	B	76	4.014	69.191	13.734	1.00	48.89	C
ATOM	7273	O	TRP	B	76	5.038	68.975	13.069	1.00	42.88	O
ATOM	7274	N	GLU	B	77	3.263	70.251	13.522	1.00	52.51	N
ATOM	7276	CA	GLU	B	77	3.588	71.211	12.483	1.00	54.19	C
ATOM	7278	CB	GLU	B	77	2.687	71.014	11.221	1.00	56.34	C
ATOM	7281	CG	GLU	B	77	2.928	71.973	10.024	1.00	65.54	C
ATOM	7284	CD	GLU	B	77	3.069	71.317	8.600	1.00	75.14	C
ATOM	7285	OE1	GLU	B	77	2.692	70.105	8.385	1.00	75.56	O
ATOM	7286	OE2	GLU	B	77	3.577	72.039	7.665	1.00	68.89	O
ATOM	7287	C	GLU	B	77	3.390	72.532	13.201	1.00	48.29	C
ATOM	7288	O	GLU	B	77	2.470	72.671	14.038	1.00	50.80	O

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ATOM   7289  N   GLY B  78       4.249  73.495  12.906  1.00 39.02           N
ATOM   7291  CA  GLY B  78       4.116  74.794  13.527  1.00 38.17           C
ATOM   7294  C   GLY B  78       4.560  75.872  12.574  1.00 41.86           C
ATOM   7295  O   GLY B  78       4.622  75.629  11.360  1.00 42.61           O
ATOM   7296  N   GLU B  79       4.865  77.040  13.150  1.00 40.98           N
ATOM   7298  CA  GLU B  79       5.353  78.217  12.458  1.00 40.07           C
ATOM   7300  CB  GLU B  79       4.182  79.179  12.341  1.00 45.01           C
ATOM   7303  CG  GLU B  79       3.271  78.881  11.161  1.00 48.35           C
ATOM   7306  CD  GLU B  79       1.879  79.445  11.376  1.00 59.96           C
ATOM   7307  OE1 GLU B  79       1.026  79.356  10.435  1.00 58.74           O
ATOM   7308  OE2 GLU B  79       1.656  79.975  12.506  1.00 62.96           O
ATOM   7309  C   GLU B  79       6.534  78.904  13.206  1.00 39.29           C
ATOM   7310  O   GLU B  79       6.387  79.304  14.373  1.00 42.71           O
ATOM   7311  N   LEU B  80       7.685  79.057  12.520  1.00 40.28           N
ATOM   7313  CA  LEU B  80       8.955  79.568  13.102  1.00 36.41           C
ATOM   7315  CB  LEU B  80      10.154  79.219  12.177  1.00 36.64           C
ATOM   7318  CG  LEU B  80      10.738  77.781  12.076  1.00 37.91           C
ATOM   7320  CD1 LEU B  80      11.526  77.548  10.745  1.00 39.77           C
ATOM   7324  CD2 LEU B  80      11.649  77.344  13.193  1.00 36.07           C
ATOM   7328  C   LEU B  80       8.966  81.088  13.467  1.00 33.54           C
ATOM   7329  O   LEU B  80       8.254  81.878  12.905  1.00 32.98           O
ATOM   7330  N   GLY B  81       9.775  81.482  14.431  1.00 32.51           N
ATOM   7332  CA  GLY B  81       9.853  82.869  14.860  1.00 36.03           C
ATOM   7335  C   GLY B  81      11.029  82.934  15.848  1.00 42.04           C
ATOM   7336  O   GLY B  81      11.757  81.938  15.970  1.00 29.06           O
ATOM   7337  N   THR B  82      11.223  84.089  16.504  1.00 41.12           N
ATOM   7339  CA  THR B  82      12.122  84.225  17.659  1.00 44.53           C
ATOM   7341  CB  THR B  82      13.486  84.776  17.289  1.00 41.56           C
ATOM   7343  OG1 THR B  82      13.438  86.212  17.236  1.00 37.05           O
ATOM   7345  CG2 THR B  82      13.898  84.298  15.882  1.00 44.94           C
ATOM   7349  C   THR B  82      11.512  85.157  18.726  1.00 47.70           C
ATOM   7350  O   THR B  82      10.689  86.007  18.424  1.00 48.47           O
ATOM   7351  N   ASP B  83      11.949  84.980  19.971  1.00 49.65           N
ATOM   7353  CA  ASP B  83      11.536  85.805  21.078  1.00 43.80           C
ATOM   7355  CB  ASP B  83      10.137  85.412  21.497  1.00 45.31           C
ATOM   7358  CG  ASP B  83       9.416  86.517  22.208  1.00 48.10           C
ATOM   7359  OD1 ASP B  83      10.063  87.357  22.873  1.00 43.35           O
ATOM   7360  OD2 ASP B  83       8.174  86.617  22.144  1.00 55.68           O
ATOM   7361  C   ASP B  83      12.515  85.545  22.220  1.00 44.30           C
ATOM   7362  O   ASP B  83      13.317  84.618  22.164  1.00 42.87           O
ATOM   7363  N   LEU B  84      12.431  86.359  23.264  1.00 44.69           N
ATOM   7365  CA  LEU B  84      13.305  86.237  24.412  1.00 44.31           C
ATOM   7367  CB  LEU B  84      13.298  87.556  25.184  1.00 42.41           C
ATOM   7370  CG  LEU B  84      14.000  88.765  24.573  1.00 46.49           C
ATOM   7372  CD1 LEU B  84      14.187  89.925  25.584  1.00 45.21           C
ATOM   7376  CD2 LEU B  84      15.355  88.390  23.988  1.00 47.47           C
ATOM   7380  C   LEU B  84      12.880  85.069  25.317  1.00 43.92           C
ATOM   7381  O   LEU B  84      11.702  84.796  25.459  1.00 43.23           O
ATOM   7382  N   VAL B  85      13.859  84.407  25.939  1.00 48.76           N
ATOM   7384  CA  VAL B  85      13.639  83.210  26.747  1.00 48.52           C
ATOM   7386  CB  VAL B  85      13.957  81.977  25.854  1.00 49.65           C
ATOM   7388  CG1 VAL B  85      13.559  80.668  26.519  1.00 54.85           C
ATOM   7392  CG2 VAL B  85      13.231  82.099  24.546  1.00 45.28           C
ATOM   7396  C   VAL B  85      14.484  83.123  28.044  1.00 48.30           C
ATOM   7397  O   VAL B  85      15.712  83.170  27.981  1.00 45.59           O
ATOM   7398  N   SER B  86      13.825  83.000  29.206  1.00 49.13           N
ATOM   7400  CA  SER B  86      14.515  82.778  30.497  1.00 50.27           C
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ATOM	7402	CB	SER	B	86	14.143	83.844	31.493	1.00	52.28	C
ATOM	7405	OG	SER	B	86	13.971	85.077	30.826	1.00	61.45	O
ATOM	7407	C	SER	B	86	14.229	81.445	31.163	1.00	49.71	C
ATOM	7408	O	SER	B	86	13.262	80.765	30.859	1.00	54.75	O
ATOM	7409	N	ILE	B	87	15.095	81.078	32.089	1.00	52.73	N
ATOM	7411	CA	ILE	B	87	14.987	79.820	32.822	1.00	52.37	C
ATOM	7413	CB	ILE	B	87	16.176	78.977	32.494	1.00	50.27	C
ATOM	7415	CG1	ILE	B	87	16.194	78.704	30.987	1.00	55.91	C
ATOM	7418	CD1	ILE	B	87	17.502	78.078	30.465	1.00	57.49	C
ATOM	7422	CG2	ILE	B	87	16.117	77.687	33.268	1.00	52.97	C
ATOM	7426	C	ILE	B	87	14.957	80.130	34.316	1.00	53.74	C
ATOM	7427	O	ILE	B	87	15.994	80.160	34.966	1.00	56.92	O
ATOM	7428	N	PRO	B	88	13.764	80.351	34.856	1.00	54.08	N
ATOM	7429	CA	PRO	B	88	13.610	80.874	36.215	1.00	55.87	C
ATOM	7431	CB	PRO	B	88	12.110	80.664	36.510	1.00	54.68	C
ATOM	7434	CG	PRO	B	88	11.476	80.768	35.191	1.00	51.31	C
ATOM	7437	CD	PRO	B	88	12.456	80.123	34.227	1.00	53.64	C
ATOM	7440	C	PRO	B	88	14.441	80.173	37.222	1.00	53.06	C
ATOM	7441	O	PRO	B	88	14.892	80.795	38.153	1.00	61.22	O
ATOM	7442	N	HIS	B	89	14.636	78.890	37.056	1.00	55.41	N
ATOM	7444	CA	HIS	B	89	15.464	78.155	38.000	1.00	57.00	C
ATOM	7446	CB	HIS	B	89	14.649	77.063	38.654	1.00	57.60	C
ATOM	7449	CG	HIS	B	89	13.583	77.600	39.539	1.00	62.81	C
ATOM	7450	ND1	HIS	B	89	13.871	78.340	40.670	1.00	65.83	N
ATOM	7452	CE1	HIS	B	89	12.738	78.695	41.251	1.00	69.42	C
ATOM	7454	NE2	HIS	B	89	11.729	78.218	40.536	1.00	66.12	N
ATOM	7456	CD2	HIS	B	89	12.232	77.532	39.456	1.00	60.92	C
ATOM	7458	C	HIS	B	89	16.689	77.559	37.354	1.00	56.54	C
ATOM	7459	O	HIS	B	89	17.155	76.516	37.779	1.00	57.96	O
ATOM	7460	N	GLY	B	90	17.200	78.221	36.323	1.00	57.33	N
ATOM	7462	CA	GLY	B	90	18.440	77.811	35.697	1.00	58.75	C
ATOM	7465	C	GLY	B	90	19.429	78.892	36.074	1.00	60.53	C
ATOM	7466	O	GLY	B	90	19.312	79.504	37.142	1.00	61.84	O
ATOM	7467	N	PRO	B	91	20.414	79.142	35.224	1.00	60.10	N
ATOM	7468	CA	PRO	B	91	21.300	80.262	35.461	1.00	57.74	C
ATOM	7470	CB	PRO	B	91	22.367	80.061	34.393	1.00	57.95	C
ATOM	7473	CG	PRO	B	91	21.614	79.508	33.279	1.00	56.85	C
ATOM	7476	CD	PRO	B	91	20.778	78.440	33.977	1.00	59.95	C
ATOM	7479	C	PRO	B	91	20.377	81.434	35.169	1.00	63.13	C
ATOM	7480	O	PRO	B	91	19.180	81.167	34.938	1.00	60.03	O
ATOM	7481	N	GLN	B	92	20.873	82.666	35.162	1.00	63.92	N
ATOM	7483	CA	GLN	B	92	19.996	83.819	35.023	1.00	66.19	C
ATOM	7485	CB	GLN	B	92	19.937	84.573	36.346	1.00	71.25	C
ATOM	7488	CG	GLN	B	92	19.439	83.713	37.525	1.00	73.31	C
ATOM	7491	CD	GLN	B	92	17.921	83.718	37.685	1.00	76.42	C
ATOM	7492	OE1	GLN	B	92	17.345	82.717	38.150	1.00	76.72	O
ATOM	7493	NE2	GLN	B	92	17.269	84.834	37.311	1.00	72.82	N
ATOM	7496	C	GLN	B	92	20.453	84.734	33.903	1.00	69.00	C
ATOM	7497	O	GLN	B	92	21.150	85.732	34.104	1.00	67.78	O
ATOM	7498	N	VAL	B	93	20.038	84.373	32.707	1.00	70.27	N
ATOM	7500	CA	VAL	B	93	20.402	85.094	31.520	1.00	70.88	C
ATOM	7502	CB	VAL	B	93	21.394	84.265	30.700	1.00	71.94	C
ATOM	7504	CG1	VAL	B	93	22.762	84.286	31.339	1.00	72.94	C
ATOM	7508	CG2	VAL	B	93	20.874	82.801	30.523	1.00	72.84	C
ATOM	7512	C	VAL	B	93	19.151	85.148	30.710	1.00	69.30	C
ATOM	7513	O	VAL	B	93	18.311	84.268	30.889	1.00	70.51	O
ATOM	7514	N	THR	B	94	18.997	86.150	29.841	1.00	65.09	N

ATOM	7516	CA	THR	B	94	17.947	86.039	28.832	1.00	65.10	C
ATOM	7518	CB	THR	B	94	17.092	87.296	28.739	1.00	68.17	C
ATOM	7520	OG1	THR	B	94	16.798	87.798	30.049	1.00	65.92	O
ATOM	7522	CG2	THR	B	94	15.731	86.972	28.133	1.00	72.53	C
ATOM	7526	C	THR	B	94	18.602	85.783	27.479	1.00	64.42	C
ATOM	7527	O	THR	B	94	19.532	86.496	27.088	1.00	69.43	O
ATOM	7528	N	VAL	B	95	18.140	84.772	26.756	1.00	57.14	N
ATOM	7530	CA	VAL	B	95	18.729	84.515	25.456	1.00	53.12	C
ATOM	7532	CB	VAL	B	95	19.394	83.121	25.323	1.00	50.84	C
ATOM	7534	CG1	VAL	B	95	19.700	82.566	26.659	1.00	54.68	C
ATOM	7538	CG2	VAL	B	95	18.555	82.158	24.577	1.00	46.33	C
ATOM	7542	C	VAL	B	95	17.635	84.620	24.454	1.00	52.68	C
ATOM	7543	O	VAL	B	95	16.475	84.377	24.770	1.00	47.03	O
ATOM	7544	N	ARG	B	96	18.010	84.998	23.242	1.00	50.05	N
ATOM	7546	CA	ARG	B	96	17.048	85.078	22.187	1.00	47.77	C
ATOM	7548	CB	ARG	B	96	17.343	86.245	21.248	1.00	45.70	C
ATOM	7551	CG	ARG	B	96	16.445	86.196	20.020	1.00	41.87	C
ATOM	7554	CD	ARG	B	96	16.267	87.486	19.279	1.00	44.39	C
ATOM	7557	NE	ARG	B	96	15.656	88.527	20.105	1.00	45.56	N
ATOM	7559	CZ	ARG	B	96	14.448	89.021	19.914	1.00	41.74	C
ATOM	7560	NH1	ARG	B	96	13.712	88.593	18.920	1.00	37.61	N
ATOM	7563	NH2	ARG	B	96	13.977	89.956	20.726	1.00	48.72	N
ATOM	7566	C	ARG	B	96	17.247	83.796	21.457	1.00	47.04	C
ATOM	7567	O	ARG	B	96	18.390	83.416	21.245	1.00	51.41	O
ATOM	7568	N	ALA	B	97	16.177	83.108	21.071	1.00	44.16	N
ATOM	7570	CA	ALA	B	97	16.390	81.906	20.291	1.00	43.51	C
ATOM	7572	CB	ALA	B	97	16.628	80.760	21.208	1.00	41.66	C
ATOM	7576	C	ALA	B	97	15.262	81.580	19.331	1.00	42.64	C
ATOM	7577	O	ALA	B	97	14.192	82.200	19.417	1.00	45.18	O
ATOM	7578	N	ASN	B	98	15.538	80.622	18.420	1.00	37.65	N
ATOM	7580	CA	ASN	B	98	14.564	80.108	17.495	1.00	37.82	C
ATOM	7582	CB	ASN	B	98	15.180	79.190	16.478	1.00	38.29	C
ATOM	7585	CG	ASN	B	98	16.227	79.845	15.654	1.00	41.90	C
ATOM	7586	OD1	ASN	B	98	15.963	80.774	14.861	1.00	51.82	O
ATOM	7587	ND2	ASN	B	98	17.441	79.362	15.803	1.00	44.46	N
ATOM	7590	C	ASN	B	98	13.573	79.313	18.299	1.00	39.41	C
ATOM	7591	O	ASN	B	98	13.936	78.699	19.292	1.00	41.27	O
ATOM	7592	N	ILE	B	99	12.325	79.318	17.851	1.00	44.08	N
ATOM	7594	CA	ILE	B	99	11.187	78.736	18.576	1.00	43.13	C
ATOM	7596	CB	ILE	B	99	10.469	79.758	19.384	1.00	40.30	C
ATOM	7598	CG1	ILE	B	99	11.428	80.624	20.138	1.00	39.86	C
ATOM	7601	CD1	ILE	B	99	10.726	81.360	21.242	1.00	36.21	C
ATOM	7605	CG2	ILE	B	99	9.611	79.058	20.375	1.00	45.93	C
ATOM	7609	C	ILE	B	99	10.139	78.281	17.626	1.00	43.82	C
ATOM	7610	O	ILE	B	99	9.810	78.974	16.701	1.00	48.75	O
ATOM	7611	N	ALA	B	100	9.566	77.132	17.846	1.00	42.61	N
ATOM	7613	CA	ALA	B	100	8.610	76.737	16.883	1.00	43.98	C
ATOM	7615	CB	ALA	B	100	8.915	75.337	16.354	1.00	44.52	C
ATOM	7619	C	ALA	B	100	7.296	76.786	17.546	1.00	46.44	C
ATOM	7620	O	ALA	B	100	7.033	76.009	18.472	1.00	47.34	O
ATOM	7621	N	ALA	B	101	6.466	77.717	17.082	1.00	50.00	N
ATOM	7623	CA	ALA	B	101	5.076	77.790	17.525	1.00	44.40	C
ATOM	7625	CB	ALA	B	101	4.525	79.039	17.114	1.00	43.26	C
ATOM	7629	C	ALA	B	101	4.297	76.616	16.899	1.00	47.07	C
ATOM	7630	O	ALA	B	101	4.063	76.581	15.683	1.00	42.89	O
ATOM	7631	N	ILE	B	102	3.921	75.644	17.735	1.00	49.02	N
ATOM	7633	CA	ILE	B	102	3.167	74.464	17.301	1.00	46.91	C

ATOM	7635	CB	ILE	B	102	3.290	73.356	18.372	1.00 45.95	C
ATOM	7637	CG1	ILE	B	102	4.715	72.820	18.475	1.00 47.92	C
ATOM	7640	CD1	ILE	B	102	4.885	71.372	19.159	1.00 46.19	C
ATOM	7644	CG2	ILE	B	102	2.340	72.210	18.062	1.00 47.95	C
ATOM	7648	C	ILE	B	102	1.655	74.792	17.051	1.00 44.85	C
ATOM	7649	O	ILE	B	102	0.976	75.227	17.958	1.00 42.16	O
ATOM	7650	N	THR	B	103	1.139	74.584	15.836	1.00 43.80	N
ATOM	7652	CA	THR	B	103	-0.294	74.826	15.563	1.00 44.87	C
ATOM	7654	CB	THR	B	103	-0.531	75.962	14.515	1.00 46.18	C
ATOM	7656	OG1	THR	B	103	-0.215	75.503	13.195	1.00 45.05	O
ATOM	7658	CG2	THR	B	103	0.392	77.169	14.729	1.00 43.61	C
ATOM	7662	C	THR	B	103	-1.088	73.582	15.122	1.00 45.54	C
ATOM	7663	O	THR	B	103	-2.287	73.675	14.931	1.00 46.12	O
ATOM	7664	N	GLU	B	104	-0.422	72.437	14.960	1.00 49.61	N
ATOM	7666	CA	GLU	B	104	-1.069	71.158	14.595	1.00 51.72	C
ATOM	7668	CB	GLU	B	104	-1.337	71.025	13.092	1.00 51.86	C
ATOM	7671	CG	GLU	B	104	-2.389	71.919	12.460	1.00 58.09	C
ATOM	7674	CD	GLU	B	104	-2.627	71.491	11.014	1.00 67.47	C
ATOM	7675	OE1	GLU	B	104	-2.393	70.288	10.764	1.00 78.27	O
ATOM	7676	OE2	GLU	B	104	-3.018	72.299	10.124	1.00 66.28	O
ATOM	7677	C	GLU	B	104	-0.142	70.005	15.006	1.00 53.53	C
ATOM	7678	O	GLU	B	104	1.094	70.106	14.908	1.00 52.56	O
ATOM	7679	N	SER	B	105	-0.726	68.903	15.452	1.00 54.92	N
ATOM	7681	CA	SER	B	105	0.068	67.817	16.038	1.00 54.07	C
ATOM	7683	CB	SER	B	105	0.436	68.122	17.491	1.00 53.33	C
ATOM	7686	OG	SER	B	105	-0.746	68.387	18.230	1.00 54.72	O
ATOM	7688	C	SER	B	105	-0.697	66.547	16.057	1.00 53.09	C
ATOM	7689	O	SER	B	105	-1.903	66.512	15.853	1.00 53.09	O
ATOM	7690	N	ASP	B	106	0.021	65.483	16.321	1.00 51.65	N
ATOM	7692	CA	ASP	B	106	-0.589	64.196	16.327	1.00 53.94	C
ATOM	7694	CB	ASP	B	106	-0.600	63.656	14.878	1.00 56.95	C
ATOM	7697	CG	ASP	B	106	-1.127	62.219	14.767	1.00 61.31	C
ATOM	7698	OD1	ASP	B	106	-0.982	61.455	15.749	1.00 68.69	O
ATOM	7699	OD2	ASP	B	106	-1.685	61.764	13.742	1.00 50.04	O
ATOM	7700	C	ASP	B	106	0.215	63.336	17.289	1.00 52.73	C
ATOM	7701	O	ASP	B	106	1.407	63.125	17.096	1.00 53.01	O
ATOM	7702	N	LYS	B	107	-0.437	62.864	18.341	1.00 54.52	N
ATOM	7704	CA	LYS	B	107	0.169	61.898	19.239	1.00 56.18	C
ATOM	7706	CB	LYS	B	107	0.376	60.568	18.484	1.00 56.99	C
ATOM	7709	CG	LYS	B	107	-0.897	59.700	18.297	1.00 62.79	C
ATOM	7712	CD	LYS	B	107	-0.759	58.662	17.101	1.00 67.69	C
ATOM	7715	CE	LYS	B	107	-1.476	57.266	17.326	1.00 70.59	C
ATOM	7718	NZ	LYS	B	107	-0.573	56.024	17.628	1.00 61.25	N
ATOM	7722	C	LYS	B	107	1.496	62.465	19.798	1.00 56.67	C
ATOM	7723	O	LYS	B	107	2.496	61.745	19.939	1.00 57.97	O
ATOM	7724	N	PHE	B	108	1.485	63.757	20.131	1.00 54.71	N
ATOM	7726	CA	PHE	B	108	2.675	64.447	20.607	1.00 50.93	C
ATOM	7728	CB	PHE	B	108	2.881	65.761	19.867	1.00 49.68	C
ATOM	7731	CG	PHE	B	108	4.076	66.495	20.318	1.00 44.97	C
ATOM	7732	CD1	PHE	B	108	5.317	65.919	20.213	1.00 49.71	C
ATOM	7734	CE1	PHE	B	108	6.406	66.559	20.618	1.00 42.72	C
ATOM	7736	CZ	PHE	B	108	6.278	67.791	21.148	1.00 46.15	C
ATOM	7738	CE2	PHE	B	108	5.061	68.387	21.259	1.00 42.41	C
ATOM	7740	CD2	PHE	B	108	3.973	67.741	20.846	1.00 46.38	C
ATOM	7742	C	PHE	B	108	2.524	64.744	22.058	1.00 51.85	C
ATOM	7743	O	PHE	B	108	3.193	64.143	22.905	1.00 56.62	O
ATOM	7744	N	PHE	B	109	1.630	65.673	22.347	1.00 48.78	N

ATOM	7746	CA	PHE	B	109	1.324	66.029	23.717	1.00	49.69	C
ATOM	7748	CB	PHE	B	109	0.313	67.149	23.711	1.00	44.88	C
ATOM	7751	CG	PHE	B	109	0.729	68.284	22.858	1.00	44.87	C
ATOM	7752	CD1	PHE	B	109	-0.031	68.687	21.773	1.00	47.55	C
ATOM	7754	CE1	PHE	B	109	0.373	69.771	20.978	1.00	46.68	C
ATOM	7756	CZ	PHE	B	109	1.541	70.428	21.267	1.00	44.40	C
ATOM	7758	CE2	PHE	B	109	2.319	70.019	22.352	1.00	46.41	C
ATOM	7760	CD2	PHE	B	109	1.909	68.958	23.132	1.00	48.50	C
ATOM	7762	C	PHE	B	109	0.752	64.780	24.364	1.00	53.27	C
ATOM	7763	O	PHE	B	109	0.386	63.840	23.661	1.00	53.57	O
ATOM	7764	N	ILE	B	110	0.677	64.764	25.690	1.00	57.18	N
ATOM	7766	CA	ILE	B	110	0.196	63.588	26.417	1.00	58.89	C
ATOM	7768	CB	ILE	B	110	1.353	62.759	26.974	1.00	61.55	C
ATOM	7770	CG1	ILE	B	110	2.074	62.075	25.832	1.00	60.21	C
ATOM	7773	CD1	ILE	B	110	3.487	61.911	26.109	1.00	60.39	C
ATOM	7777	CG2	ILE	B	110	0.839	61.703	27.968	1.00	62.33	C
ATOM	7781	C	ILE	B	110	-0.672	64.038	27.547	1.00	59.34	C
ATOM	7782	O	ILE	B	110	-0.390	65.028	28.221	1.00	64.24	O
ATOM	7783	N	GLN	B	111	-1.728	63.286	27.758	1.00	63.84	N
ATOM	7785	CA	GLN	B	111	-2.744	63.660	28.706	1.00	65.98	C
ATOM	7787	CB	GLN	B	111	-3.941	62.742	28.513	1.00	66.79	C
ATOM	7790	CG	GLN	B	111	-5.248	63.200	29.097	1.00	70.55	C
ATOM	7793	CD	GLN	B	111	-6.356	62.229	28.697	1.00	72.04	C
ATOM	7794	OE1	GLN	B	111	-6.292	61.033	29.023	1.00	74.63	O
ATOM	7795	NE2	GLN	B	111	-7.354	62.724	27.979	1.00	73.54	N
ATOM	7798	C	GLN	B	111	-2.185	63.584	30.112	1.00	67.32	C
ATOM	7799	O	GLN	B	111	-1.659	62.542	30.546	1.00	65.83	O
ATOM	7800	N	GLY	B	112	-2.289	64.725	30.796	1.00	66.19	N
ATOM	7802	CA	GLY	B	112	-1.840	64.879	32.169	1.00	67.48	C
ATOM	7805	C	GLY	B	112	-0.336	65.050	32.368	1.00	65.65	C
ATOM	7806	O	GLY	B	112	0.120	65.257	33.492	1.00	68.14	O
ATOM	7807	N	SER	B	113	0.442	64.979	31.292	1.00	61.80	N
ATOM	7809	CA	SER	B	113	1.894	65.125	31.398	1.00	55.68	C
ATOM	7811	CB	SER	B	113	2.554	64.991	30.038	1.00	57.97	C
ATOM	7814	OG	SER	B	113	2.336	66.161	29.268	1.00	60.71	O
ATOM	7816	C	SER	B	113	2.335	66.437	31.994	1.00	48.28	C
ATOM	7817	O	SER	B	113	3.442	66.539	32.408	1.00	50.44	O
ATOM	7818	N	ASN	B	114	1.470	67.436	32.018	1.00	49.56	N
ATOM	7820	CA	ASN	B	114	1.752	68.743	32.593	1.00	47.18	C
ATOM	7822	CB	ASN	B	114	2.214	68.678	34.050	1.00	48.80	C
ATOM	7825	CG	ASN	B	114	1.907	69.976	34.796	1.00	50.93	C
ATOM	7826	OD1	ASN	B	114	0.966	70.685	34.445	1.00	58.75	O
ATOM	7827	ND2	ASN	B	114	2.688	70.294	35.807	1.00	52.05	N
ATOM	7830	C	ASN	B	114	2.746	69.569	31.814	1.00	47.99	C
ATOM	7831	O	ASN	B	114	3.077	70.715	32.203	1.00	47.48	O
ATOM	7832	N	TRP	B	115	3.266	69.060	30.717	1.00	45.35	N
ATOM	7834	CA	TRP	B	115	4.122	70.007	30.031	1.00	46.51	C
ATOM	7836	CB	TRP	B	115	5.503	69.497	29.653	1.00	38.21	C
ATOM	7839	CG	TRP	B	115	5.485	68.207	29.182	1.00	37.44	C
ATOM	7840	CD1	TRP	B	115	5.538	67.090	29.927	1.00	45.91	C
ATOM	7842	NE1	TRP	B	115	5.494	65.971	29.131	1.00	39.59	N
ATOM	7844	CE2	TRP	B	115	5.411	66.381	27.830	1.00	39.30	C
ATOM	7845	CD2	TRP	B	115	5.400	67.782	27.830	1.00	38.29	C
ATOM	7846	CE3	TRP	B	115	5.325	68.447	26.611	1.00	36.20	C
ATOM	7848	CZ3	TRP	B	115	5.254	67.738	25.483	1.00	32.01	C
ATOM	7850	CH2	TRP	B	115	5.264	66.346	25.501	1.00	42.78	C
ATOM	7852	CZ2	TRP	B	115	5.339	65.648	26.675	1.00	44.67	C

ATOM	7854	C	TRP	B	115	3.374	70.652	28.866	1.00	54.62	C
ATOM	7855	O	TRP	B	115	2.215	70.325	28.614	1.00	56.05	O
ATOM	7856	N	GLU	B	116	4.026	71.577	28.175	1.00	54.99	N
ATOM	7858	CA	GLU	B	116	3.410	72.257	27.038	1.00	52.06	C
ATOM	7860	CB	GLU	B	116	2.804	73.591	27.465	1.00	49.66	C
ATOM	7863	CG	GLU	B	116	1.880	73.473	28.675	1.00	57.34	C
ATOM	7866	CD	GLU	B	116	2.407	74.182	29.918	1.00	59.29	C
ATOM	7867	OE1	GLU	B	116	1.937	73.833	31.026	1.00	65.68	O
ATOM	7868	OE2	GLU	B	116	3.274	75.085	29.812	1.00	58.66	O
ATOM	7869	C	GLU	B	116	4.427	72.514	25.938	1.00	45.98	C
ATOM	7870	O	GLU	B	116	4.116	73.152	24.968	1.00	42.04	O
ATOM	7871	N	GLY	B	117	5.631	71.996	26.073	1.00	40.56	N
ATOM	7873	CA	GLY	B	117	6.659	72.302	25.096	1.00	45.15	C
ATOM	7876	C	GLY	B	117	7.792	71.319	25.176	1.00	44.40	C
ATOM	7877	O	GLY	B	117	7.805	70.461	26.074	1.00	47.93	O
ATOM	7878	N	ILE	B	118	8.725	71.426	24.236	1.00	40.44	N
ATOM	7880	CA	ILE	B	118	9.871	70.519	24.180	1.00	36.21	C
ATOM	7882	CB	ILE	B	118	9.674	69.514	23.086	1.00	35.00	C
ATOM	7884	CG1	ILE	B	118	10.464	68.278	23.385	1.00	33.44	C
ATOM	7887	CD1	ILE	B	118	10.403	67.207	22.303	1.00	34.03	C
ATOM	7891	CG2	ILE	B	118	10.205	70.063	21.781	1.00	39.24	C
ATOM	7895	C	ILE	B	118	11.143	71.282	23.877	1.00	41.42	C
ATOM	7896	O	ILE	B	118	11.182	72.221	23.076	1.00	44.83	O
ATOM	7897	N	LEU	B	119	12.222	70.866	24.487	1.00	41.80	N
ATOM	7899	CA	LEU	B	119	13.436	71.619	24.365	1.00	39.40	C
ATOM	7901	CB	LEU	B	119	13.746	72.308	25.689	1.00	39.02	C
ATOM	7904	CG	LEU	B	119	15.223	72.554	25.963	1.00	48.91	C
ATOM	7906	CD1	LEU	B	119	15.713	73.515	24.940	1.00	46.92	C
ATOM	7910	CD2	LEU	B	119	15.530	73.056	27.398	1.00	50.56	C
ATOM	7914	C	LEU	B	119	14.367	70.537	24.053	1.00	38.35	C
ATOM	7915	O	LEU	B	119	14.783	69.813	24.919	1.00	43.76	O
ATOM	7916	N	GLY	B	120	14.670	70.384	22.787	1.00	40.04	N
ATOM	7918	CA	GLY	B	120	15.509	69.293	22.383	1.00	39.07	C
ATOM	7921	C	GLY	B	120	16.882	69.824	22.631	1.00	40.82	C
ATOM	7922	O	GLY	B	120	17.085	71.007	22.343	1.00	40.62	O
ATOM	7923	N	LEU	B	121	17.802	68.996	23.150	1.00	35.37	N
ATOM	7925	CA	LEU	B	121	19.142	69.463	23.439	1.00	33.34	C
ATOM	7927	CB	LEU	B	121	19.468	69.229	24.895	1.00	34.88	C
ATOM	7930	CG	LEU	B	121	18.605	69.997	25.920	1.00	41.96	C
ATOM	7932	CD1	LEU	B	121	18.186	69.169	27.155	1.00	38.40	C
ATOM	7936	CD2	LEU	B	121	19.280	71.249	26.382	1.00	41.64	C
ATOM	7940	C	LEU	B	121	20.169	68.759	22.554	1.00	38.26	C
ATOM	7941	O	LEU	B	121	21.348	68.835	22.820	1.00	37.48	O
ATOM	7942	N	ALA	B	122	19.740	68.086	21.489	1.00	40.79	N
ATOM	7944	CA	ALA	B	122	20.697	67.353	20.674	1.00	42.59	C
ATOM	7946	CB	ALA	B	122	20.045	66.267	19.949	1.00	49.22	C
ATOM	7950	C	ALA	B	122	21.322	68.323	19.728	1.00	45.18	C
ATOM	7951	O	ALA	B	122	21.205	69.515	19.938	1.00	45.85	O
ATOM	7952	N	TYR	B	123	22.006	67.848	18.697	1.00	47.39	N
ATOM	7954	CA	TYR	B	123	22.763	68.790	17.870	1.00	48.54	C
ATOM	7956	CB	TYR	B	123	24.118	68.208	17.447	1.00	50.84	C
ATOM	7959	CG	TYR	B	123	25.038	67.830	18.578	1.00	50.51	C
ATOM	7960	CD1	TYR	B	123	24.905	66.616	19.214	1.00	52.07	C
ATOM	7962	CE1	TYR	B	123	25.759	66.249	20.268	1.00	56.08	C
ATOM	7964	CZ	TYR	B	123	26.759	67.115	20.679	1.00	57.64	C
ATOM	7965	OH	TYR	B	123	27.589	66.754	21.710	1.00	62.04	O
ATOM	7967	CE2	TYR	B	123	26.917	68.341	20.054	1.00	58.63	C

ATOM	7969	CD2	TYR	B	123	26.051	68.692	19.001	1.00	56.37	C
ATOM	7971	C	TYR	B	123	21.979	69.223	16.661	1.00	43.80	C
ATOM	7972	O	TYR	B	123	20.957	68.637	16.350	1.00	50.79	O
ATOM	7973	N	ALA	B	124	22.477	70.250	15.982	1.00	43.43	N
ATOM	7975	CA	ALA	B	124	21.793	70.841	14.838	1.00	43.69	C
ATOM	7977	CB	ALA	B	124	22.566	72.036	14.319	1.00	46.07	C
ATOM	7981	C	ALA	B	124	21.612	69.869	13.717	1.00	42.56	C
ATOM	7982	O	ALA	B	124	20.594	69.882	13.067	1.00	42.47	O
ATOM	7983	N	GLU	B	125	22.582	69.006	13.476	1.00	44.82	N
ATOM	7985	CA	GLU	B	125	22.469	68.163	12.296	1.00	47.99	C
ATOM	7987	CB	GLU	B	125	23.515	67.059	12.235	1.00	49.37	C
ATOM	7990	CG	GLU	B	125	22.957	65.812	11.577	1.00	57.34	C
ATOM	7993	CD	GLU	B	125	23.551	65.493	10.224	1.00	64.77	C
ATOM	7994	OE1	GLU	B	125	24.491	64.674	10.186	1.00	71.72	O
ATOM	7995	OE2	GLU	B	125	23.068	66.040	9.201	1.00	74.39	O
ATOM	7996	C	GLU	B	125	21.107	67.553	12.132	1.00	44.92	C
ATOM	7997	O	GLU	B	125	20.708	67.270	11.008	1.00	47.91	O
ATOM	7998	N	ILE	B	126	20.381	67.329	13.219	1.00	43.01	N
ATOM	8000	CA	ILE	B	126	19.116	66.641	13.067	1.00	40.58	C
ATOM	8002	CB	ILE	B	126	19.078	65.412	13.969	1.00	39.84	C
ATOM	8004	CG1	ILE	B	126	18.870	65.776	15.413	1.00	43.52	C
ATOM	8007	CD1	ILE	B	126	18.662	64.549	16.288	1.00	44.92	C
ATOM	8011	CG2	ILE	B	126	20.372	64.751	13.908	1.00	40.38	C
ATOM	8015	C	ILE	B	126	17.962	67.565	13.315	1.00	42.42	C
ATOM	8016	O	ILE	B	126	16.823	67.138	13.565	1.00	40.90	O
ATOM	8017	N	ALA	B	127	18.250	68.853	13.236	1.00	42.86	N
ATOM	8019	CA	ALA	B	127	17.202	69.836	13.404	1.00	42.99	C
ATOM	8021	CB	ALA	B	127	17.753	71.130	13.922	1.00	44.98	C
ATOM	8025	C	ALA	B	127	16.525	70.059	12.091	1.00	41.47	C
ATOM	8026	O	ALA	B	127	17.105	69.882	11.050	1.00	39.97	O
ATOM	8027	N	ARG	B	128	15.272	70.444	12.165	1.00	44.79	N
ATOM	8029	CA	ARG	B	128	14.517	70.755	10.990	1.00	43.13	C
ATOM	8031	CB	ARG	B	128	13.282	69.894	10.960	1.00	42.01	C
ATOM	8034	CG	ARG	B	128	13.574	68.400	11.101	1.00	49.12	C
ATOM	8037	CD	ARG	B	128	13.536	67.609	9.795	1.00	52.69	C
ATOM	8040	NE	ARG	B	128	13.330	66.174	10.019	1.00	58.75	N
ATOM	8042	CZ	ARG	B	128	12.511	65.403	9.306	1.00	61.67	C
ATOM	8043	NH1	ARG	B	128	11.809	65.915	8.308	1.00	58.06	N
ATOM	8046	NH2	ARG	B	128	12.396	64.110	9.592	1.00	62.03	N
ATOM	8049	C	ARG	B	128	14.154	72.208	11.134	1.00	41.86	C
ATOM	8050	O	ARG	B	128	14.131	72.729	12.258	1.00	39.07	O
ATOM	8051	N	PRO	B	129	13.883	72.863	10.013	1.00	42.22	N
ATOM	8052	CA	PRO	B	129	13.958	72.233	8.694	1.00	43.56	C
ATOM	8054	CB	PRO	B	129	13.390	73.274	7.755	1.00	45.93	C
ATOM	8057	CG	PRO	B	129	12.704	74.249	8.633	1.00	47.55	C
ATOM	8060	CD	PRO	B	129	13.465	74.266	9.924	1.00	43.06	C
ATOM	8063	C	PRO	B	129	15.348	71.893	8.290	1.00	45.94	C
ATOM	8064	O	PRO	B	129	15.524	71.066	7.396	1.00	49.70	O
ATOM	8065	N	ASP	B	130	16.340	72.488	8.929	1.00	51.65	N
ATOM	8067	CA	ASP	B	130	17.715	72.086	8.642	1.00	53.34	C
ATOM	8069	CB	ASP	B	130	18.119	72.654	7.330	1.00	55.91	C
ATOM	8072	CG	ASP	B	130	18.180	74.138	7.387	1.00	61.07	C
ATOM	8073	OD1	ASP	B	130	17.510	74.791	6.545	1.00	72.80	O
ATOM	8074	OD2	ASP	B	130	18.856	74.738	8.265	1.00	52.07	O
ATOM	8075	C	ASP	B	130	18.748	72.613	9.600	1.00	55.45	C
ATOM	8076	O	ASP	B	130	18.515	73.579	10.342	1.00	58.60	O
ATOM	8077	N	ASP	B	131	19.918	71.989	9.529	1.00	53.37	N

ATOM	8079	CA	ASP	B	131	21.056	72.356	10.347	1.00	52.86	C
ATOM	8081	CB	ASP	B	131	22.321	71.615	9.849	1.00	56.83	C
ATOM	8084	CG	ASP	B	131	22.898	72.170	8.499	1.00	67.88	C
ATOM	8085	OD1	ASP	B	131	22.369	73.164	7.913	1.00	71.66	O
ATOM	8086	OD2	ASP	B	131	23.911	71.651	7.950	1.00	67.67	O
ATOM	8087	C	ASP	B	131	21.294	73.855	10.486	1.00	47.33	C
ATOM	8088	O	ASP	B	131	22.103	74.261	11.276	1.00	55.44	O
ATOM	8089	N	SER	B	132	20.599	74.692	9.743	1.00	49.22	N
ATOM	8091	CA	SER	B	132	20.799	76.144	9.863	1.00	51.59	C
ATOM	8093	CB	SER	B	132	20.431	76.880	8.576	1.00	56.09	C
ATOM	8096	OG	SER	B	132	19.064	77.316	8.672	1.00	56.61	O
ATOM	8098	C	SER	B	132	19.910	76.773	10.877	1.00	48.16	C
ATOM	8099	O	SER	B	132	19.967	77.966	11.030	1.00	48.29	O
ATOM	8100	N	LEU	B	133	19.044	75.996	11.514	1.00	51.70	N
ATOM	8102	CA	LEU	B	133	18.210	76.511	12.594	1.00	48.34	C
ATOM	8104	CB	LEU	B	133	16.784	75.967	12.530	1.00	50.22	C
ATOM	8107	CG	LEU	B	133	15.867	76.770	13.479	1.00	50.22	C
ATOM	8109	CD1	LEU	B	133	15.291	77.914	12.692	1.00	51.60	C
ATOM	8113	CD2	LEU	B	133	14.749	75.979	14.133	1.00	46.25	C
ATOM	8117	C	LEU	B	133	18.841	76.165	13.947	1.00	48.97	C
ATOM	8118	O	LEU	B	133	18.549	75.164	14.561	1.00	55.14	O
ATOM	8119	N	GLU	B	134	19.728	77.021	14.398	1.00	51.87	N
ATOM	8121	CA	GLU	B	134	20.411	76.871	15.673	1.00	49.82	C
ATOM	8123	CB	GLU	B	134	21.132	78.206	15.930	1.00	52.58	C
ATOM	8126	CG	GLU	B	134	21.942	78.394	17.194	1.00	57.11	C
ATOM	8129	CD	GLU	B	134	22.920	79.568	17.051	1.00	62.70	C
ATOM	8130	OE1	GLU	B	134	23.903	79.441	16.281	1.00	65.85	O
ATOM	8131	OE2	GLU	B	134	22.717	80.622	17.696	1.00	63.04	O
ATOM	8132	C	GLU	B	134	19.462	76.499	16.822	1.00	46.15	C
ATOM	8133	O	GLU	B	134	18.509	77.230	17.070	1.00	40.78	O
ATOM	8134	N	PRO	B	135	19.735	75.368	17.494	1.00	39.43	N
ATOM	8135	CA	PRO	B	135	19.040	74.917	18.710	1.00	40.62	C
ATOM	8137	CB	PRO	B	135	19.597	73.515	18.944	1.00	39.60	C
ATOM	8140	CG	PRO	B	135	20.409	73.187	17.783	1.00	40.53	C
ATOM	8143	CD	PRO	B	135	20.750	74.409	17.082	1.00	41.45	C
ATOM	8146	C	PRO	B	135	19.301	75.722	19.982	1.00	39.91	C
ATOM	8147	O	PRO	B	135	20.327	76.366	20.169	1.00	42.53	O
ATOM	8148	N	PHE	B	136	18.361	75.638	20.906	1.00	44.02	N
ATOM	8150	CA	PHE	B	136	18.396	76.470	22.119	1.00	44.27	C
ATOM	8152	CB	PHE	B	136	17.279	76.100	23.088	1.00	41.68	C
ATOM	8155	CG	PHE	B	136	17.309	76.929	24.293	1.00	39.04	C
ATOM	8156	CD1	PHE	B	136	16.639	78.098	24.334	1.00	40.01	C
ATOM	8158	CE1	PHE	B	136	16.683	78.881	25.442	1.00	43.44	C
ATOM	8160	CZ	PHE	B	136	17.417	78.488	26.517	1.00	46.05	C
ATOM	8162	CE2	PHE	B	136	18.113	77.300	26.477	1.00	43.71	C
ATOM	8164	CD2	PHE	B	136	18.056	76.545	25.374	1.00	44.61	C
ATOM	8166	C	PHE	B	136	19.672	76.460	22.926	1.00	42.84	C
ATOM	8167	O	PHE	B	136	20.091	77.478	23.427	1.00	44.70	O
ATOM	8168	N	PHE	B	137	20.282	75.304	23.088	1.00	44.28	N
ATOM	8170	CA	PHE	B	137	21.496	75.261	23.888	1.00	45.73	C
ATOM	8172	CB	PHE	B	137	21.819	73.830	24.336	1.00	46.94	C
ATOM	8175	CG	PHE	B	137	22.697	73.789	25.521	1.00	45.95	C
ATOM	8176	CD1	PHE	B	137	22.194	73.993	26.756	1.00	47.44	C
ATOM	8178	CE1	PHE	B	137	23.015	73.972	27.830	1.00	47.99	C
ATOM	8180	CZ	PHE	B	137	24.338	73.756	27.680	1.00	36.10	C
ATOM	8182	CE2	PHE	B	137	24.842	73.561	26.482	1.00	37.75	C
ATOM	8184	CD2	PHE	B	137	24.041	73.575	25.394	1.00	45.95	C

ATOM	8186	C	PHE	B	137	22.696	75.938	23.216	1.00	43.32	C
ATOM	8187	O	PHE	B	137	23.468	76.599	23.887	1.00	42.97	O
ATOM	8188	N	ASP	B	138	22.843	75.783	21.895	1.00	44.54	N
ATOM	8190	CA	ASP	B	138	23.891	76.481	21.156	1.00	37.01	C
ATOM	8192	CB	ASP	B	138	23.736	76.253	19.706	1.00	35.76	C
ATOM	8195	CG	ASP	B	138	24.247	74.993	19.282	1.00	41.96	C
ATOM	8196	OD1	ASP	B	138	25.187	75.024	18.467	1.00	61.10	O
ATOM	8197	OD2	ASP	B	138	23.796	73.908	19.672	1.00	56.89	O
ATOM	8198	C	ASP	B	138	23.788	77.995	21.316	1.00	43.61	C
ATOM	8199	O	ASP	B	138	24.743	78.650	21.697	1.00	47.84	O
ATOM	8200	N	SER	B	139	22.626	78.554	20.991	1.00	46.65	N
ATOM	8202	CA	SER	B	139	22.433	79.979	21.115	1.00	48.26	C
ATOM	8204	CB	SER	B	139	21.004	80.383	20.742	1.00	51.54	C
ATOM	8207	OG	SER	B	139	20.647	79.872	19.469	1.00	51.53	O
ATOM	8209	C	SER	B	139	22.691	80.372	22.526	1.00	48.43	C
ATOM	8210	O	SER	B	139	23.245	81.423	22.774	1.00	49.51	O
ATOM	8211	N	LEU	B	140	22.286	79.537	23.470	1.00	52.62	N
ATOM	8213	CA	LEU	B	140	22.480	79.895	24.874	1.00	56.48	C
ATOM	8215	CB	LEU	B	140	21.930	78.831	25.813	1.00	56.51	C
ATOM	8218	CG	LEU	B	140	22.375	79.194	27.234	1.00	54.72	C
ATOM	8220	CD1	LEU	B	140	21.590	80.369	27.719	1.00	55.46	C
ATOM	8224	CD2	LEU	B	140	22.222	78.095	28.210	1.00	57.48	C
ATOM	8228	C	LEU	B	140	23.955	80.086	25.211	1.00	57.93	C
ATOM	8229	O	LEU	B	140	24.333	81.037	25.897	1.00	59.89	O
ATOM	8230	N	VAL	B	141	24.793	79.168	24.751	1.00	55.68	N
ATOM	8232	CA	VAL	B	141	26.196	79.300	25.021	1.00	54.58	C
ATOM	8234	CB	VAL	B	141	26.883	78.025	24.692	1.00	58.69	C
ATOM	8236	CG1	VAL	B	141	28.370	78.251	24.440	1.00	58.03	C
ATOM	8240	CG2	VAL	B	141	26.664	77.039	25.839	1.00	61.23	C
ATOM	8244	C	VAL	B	141	26.822	80.452	24.243	1.00	57.01	C
ATOM	8245	O	VAL	B	141	27.587	81.229	24.817	1.00	58.33	O
ATOM	8246	N	LYS	B	142	26.517	80.585	22.948	1.00	54.66	N
ATOM	8248	CA	LYS	B	142	27.109	81.677	22.188	1.00	51.01	C
ATOM	8250	CB	LYS	B	142	26.710	81.694	20.673	1.00	47.84	C
ATOM	8253	CG	LYS	B	142	27.455	80.681	19.723	1.00	48.68	C
ATOM	8256	CD	LYS	B	142	26.743	80.426	18.329	1.00	54.09	C
ATOM	8259	CE	LYS	B	142	27.275	79.184	17.438	1.00	59.89	C
ATOM	8262	NZ	LYS	B	142	26.633	77.779	17.577	1.00	63.41	N
ATOM	8266	C	LYS	B	142	26.755	82.966	22.952	1.00	49.96	C
ATOM	8267	O	LYS	B	142	27.616	83.791	23.156	1.00	61.21	O
ATOM	8268	N	GLN	B	143	25.521	83.104	23.424	1.00	50.78	N
ATOM	8270	CA	GLN	B	143	24.976	84.369	24.029	1.00	49.37	C
ATOM	8272	CB	GLN	B	143	23.414	84.421	23.829	1.00	45.79	C
ATOM	8275	CG	GLN	B	143	22.945	84.825	22.372	1.00	47.31	C
ATOM	8278	CD	GLN	B	143	21.414	84.810	22.107	1.00	47.17	C
ATOM	8279	OE1	GLN	B	143	20.610	85.248	22.936	1.00	50.01	O
ATOM	8280	NE2	GLN	B	143	21.028	84.304	20.937	1.00	42.57	N
ATOM	8283	C	GLN	B	143	25.276	84.719	25.510	1.00	49.46	C
ATOM	8284	O	GLN	B	143	24.919	85.789	25.961	1.00	53.59	O
ATOM	8285	N	THR	B	144	25.887	83.831	26.275	1.00	54.02	N
ATOM	8287	CA	THR	B	144	26.271	84.125	27.662	1.00	56.45	C
ATOM	8289	CB	THR	B	144	25.218	83.587	28.639	1.00	58.45	C
ATOM	8291	OG1	THR	B	144	25.574	82.273	29.043	1.00	57.95	O
ATOM	8293	CG2	THR	B	144	23.847	83.426	27.968	1.00	57.06	C
ATOM	8297	C	THR	B	144	27.659	83.476	27.925	1.00	62.87	C
ATOM	8298	O	THR	B	144	28.354	83.092	26.977	1.00	65.39	O
ATOM	8299	N	HIS	B	145	28.091	83.348	29.174	1.00	65.98	N

ATOM	8301	CA	HIS	B	145	29.387	82.706	29.445	1.00	74.26	C
ATOM	8303	CB	HIS	B	145	30.175	83.559	30.474	1.00	80.56	C
ATOM	8306	CG	HIS	B	145	30.447	84.988	30.036	1.00	86.80	C
ATOM	8307	ND1	HIS	B	145	29.853	86.089	30.629	1.00	87.60	N
ATOM	8309	CE1	HIS	B	145	30.285	87.194	30.045	1.00	87.90	C
ATOM	8311	NE2	HIS	B	145	31.142	86.856	29.099	1.00	89.90	N
ATOM	8313	CD2	HIS	B	145	31.263	85.486	29.073	1.00	88.35	C
ATOM	8315	C	HIS	B	145	29.243	81.228	29.905	1.00	71.71	C
ATOM	8316	O	HIS	B	145	30.212	80.600	30.363	1.00	71.89	O
ATOM	8317	N	VAL	B	146	28.031	80.682	29.754	1.00	66.58	N
ATOM	8319	CA	VAL	B	146	27.678	79.350	30.230	1.00	58.14	C
ATOM	8321	CB	VAL	B	146	26.233	79.064	29.905	1.00	59.42	C
ATOM	8323	CG1	VAL	B	146	25.936	77.582	29.997	1.00	62.47	C
ATOM	8327	CG2	VAL	B	146	25.357	79.864	30.838	1.00	57.89	C
ATOM	8331	C	VAL	B	146	28.537	78.328	29.562	1.00	54.48	C
ATOM	8332	O	VAL	B	146	28.531	78.205	28.337	1.00	59.51	O
ATOM	8333	N	PRO	B	147	29.288	77.580	30.359	1.00	51.96	N
ATOM	8334	CA	PRO	B	147	30.138	76.562	29.777	1.00	49.03	C
ATOM	8336	CB	PRO	B	147	30.757	75.883	30.985	1.00	46.35	C
ATOM	8339	CG	PRO	B	147	30.725	76.871	32.008	1.00	44.84	C
ATOM	8342	CD	PRO	B	147	29.404	77.576	31.827	1.00	51.63	C
ATOM	8345	C	PRO	B	147	29.250	75.614	29.019	1.00	51.04	C
ATOM	8346	O	PRO	B	147	28.120	75.312	29.390	1.00	56.78	O
ATOM	8347	N	ASN	B	148	29.782	75.143	27.923	1.00	45.46	N
ATOM	8349	CA	ASN	B	148	29.006	74.373	27.015	1.00	41.55	C
ATOM	8351	CB	ASN	B	148	29.683	74.441	25.664	1.00	43.45	C
ATOM	8354	CG	ASN	B	148	28.986	73.682	24.627	1.00	41.45	C
ATOM	8355	OD1	ASN	B	148	27.770	73.450	24.682	1.00	44.14	O
ATOM	8356	ND2	ASN	B	148	29.744	73.296	23.627	1.00	37.99	N
ATOM	8359	C	ASN	B	148	28.991	72.993	27.538	1.00	43.05	C
ATOM	8360	O	ASN	B	148	29.608	72.076	26.973	1.00	40.55	O
ATOM	8361	N	LEU	B	149	28.283	72.847	28.648	1.00	42.80	N
ATOM	8363	CA	LEU	B	149	28.132	71.521	29.273	1.00	41.70	C
ATOM	8365	CB	LEU	B	149	29.275	71.263	30.278	1.00	39.84	C
ATOM	8368	CG	LEU	B	149	29.338	69.945	31.031	1.00	41.12	C
ATOM	8370	CD1	LEU	B	149	30.675	69.702	31.551	1.00	39.27	C
ATOM	8374	CD2	LEU	B	149	28.368	69.844	32.185	1.00	43.77	C
ATOM	8378	C	LEU	B	149	26.812	71.556	30.000	1.00	42.18	C
ATOM	8379	O	LEU	B	149	26.391	72.623	30.409	1.00	48.04	O
ATOM	8380	N	PHE	B	150	26.128	70.428	30.161	1.00	37.65	N
ATOM	8382	CA	PHE	B	150	24.982	70.422	31.068	1.00	39.61	C
ATOM	8384	CB	PHE	B	150	23.718	70.954	30.396	1.00	40.04	C
ATOM	8387	CG	PHE	B	150	23.235	70.093	29.272	1.00	41.92	C
ATOM	8388	CD1	PHE	B	150	23.411	70.479	27.963	1.00	40.21	C
ATOM	8390	CE1	PHE	B	150	22.976	69.678	26.938	1.00	37.50	C
ATOM	8392	CZ	PHE	B	150	22.352	68.486	27.193	1.00	45.37	C
ATOM	8394	CE2	PHE	B	150	22.165	68.070	28.490	1.00	40.66	C
ATOM	8396	CD2	PHE	B	150	22.608	68.878	29.526	1.00	38.93	C
ATOM	8398	C	PHE	B	150	24.829	68.982	31.584	1.00	42.19	C
ATOM	8399	O	PHE	B	150	25.195	68.043	30.883	1.00	41.76	O
ATOM	8400	N	SER	B	151	24.321	68.798	32.803	1.00	37.28	N
ATOM	8402	CA	SER	B	151	24.135	67.438	33.313	1.00	42.07	C
ATOM	8404	CB	SER	B	151	25.051	67.208	34.517	1.00	38.99	C
ATOM	8407	OG	SER	B	151	25.053	68.364	35.324	1.00	34.21	O
ATOM	8409	C	SER	B	151	22.671	67.218	33.728	1.00	43.06	C
ATOM	8410	O	SER	B	151	21.970	68.169	34.071	1.00	45.97	O
ATOM	8411	N	LEU	B	152	22.207	65.979	33.719	1.00	40.15	N

ATOM	8413	CA	LEU	B	152	20.832	65.747	34.122	1.00 40.34	C
ATOM	8415	CB	LEU	B	152	19.975	65.313	32.938	1.00 42.16	C
ATOM	8418	CG	LEU	B	152	19.590	66.186	31.756	1.00 38.97	C
ATOM	8420	CD1	LEU	B	152	18.685	65.352	30.911	1.00 40.87	C
ATOM	8424	CD2	LEU	B	152	18.885	67.410	32.159	1.00 38.15	C
ATOM	8428	C	LEU	B	152	20.743	64.628	35.107	1.00 39.44	C
ATOM	8429	O	LEU	B	152	21.228	63.573	34.843	1.00 35.13	O
ATOM	8430	N	GLN	B	153	20.108	64.855	36.242	1.00 43.22	N
ATOM	8432	CA	GLN	B	153	19.824	63.772	37.180	1.00 42.34	C
ATOM	8434	CB	GLN	B	153	20.216	64.202	38.577	1.00 41.36	C
ATOM	8437	CG	GLN	B	153	20.061	63.157	39.636	1.00 43.66	C
ATOM	8440	CD	GLN	B	153	19.775	63.765	41.000	1.00 46.84	C
ATOM	8441	OE1	GLN	B	153	18.981	64.710	41.126	1.00 51.70	O
ATOM	8442	NE2	GLN	B	153	20.437	63.238	42.022	1.00 51.83	N
ATOM	8445	C	GLN	B	153	18.317	63.555	37.191	1.00 44.67	C
ATOM	8446	O	GLN	B	153	17.613	64.327	37.822	1.00 47.27	O
ATOM	8447	N	LEU	B	154	17.803	62.538	36.510	1.00 45.13	N
ATOM	8449	CA	LEU	B	154	16.364	62.281	36.551	1.00 40.93	C
ATOM	8451	CB	LEU	B	154	15.907	61.599	35.270	1.00 37.85	C
ATOM	8454	CG	LEU	B	154	16.262	62.308	33.959	1.00 35.17	C
ATOM	8456	CD1	LEU	B	154	15.572	61.588	32.748	1.00 32.97	C
ATOM	8460	CD2	LEU	B	154	15.890	63.766	34.016	1.00 30.94	C
ATOM	8464	C	LEU	B	154	16.081	61.330	37.707	1.00 49.47	C
ATOM	8465	O	LEU	B	154	16.811	60.349	37.889	1.00 54.75	O
ATOM	8466	N	CYS	B	155	15.044	61.606	38.490	1.00 52.56	N
ATOM	8468	CA	CYS	B	155	14.695	60.747	39.622	1.00 56.72	C
ATOM	8470	CB	CYS	B	155	14.662	61.539	40.934	1.00 57.35	C
ATOM	8473	SG	CYS	B	155	16.265	62.120	41.545	1.00 67.57	S
ATOM	8474	C	CYS	B	155	13.353	60.028	39.473	1.00 58.59	C
ATOM	8475	O	CYS	B	155	12.271	60.650	39.467	1.00 57.85	O
ATOM	8476	N	GLY	B	156	13.417	58.707	39.352	1.00 56.91	N
ATOM	8478	CA	GLY	B	156	12.205	57.930	39.443	1.00 58.92	C
ATOM	8481	C	GLY	B	156	11.860	57.937	40.923	1.00 58.63	C
ATOM	8482	O	GLY	B	156	12.749	58.009	41.741	1.00 56.21	O
ATOM	8483	N	ALA	B	157	10.591	57.864	41.288	1.00 62.17	N
ATOM	8485	CA	ALA	B	157	10.255	57.778	42.709	1.00 64.46	C
ATOM	8487	CB	ALA	B	157	9.080	58.650	43.026	1.00 63.92	C
ATOM	8491	C	ALA	B	157	10.022	56.338	43.211	1.00 66.10	C
ATOM	8492	O	ALA	B	157	9.966	56.114	44.426	1.00 64.25	O
ATOM	8493	N	GLY	B	158	9.883	55.383	42.284	1.00 66.93	N
ATOM	8495	CA	GLY	B	158	9.804	53.966	42.636	1.00 69.42	C
ATOM	8498	C	GLY	B	158	8.530	53.537	43.351	1.00 70.66	C
ATOM	8499	O	GLY	B	158	8.531	52.749	44.322	1.00 69.74	O
ATOM	8500	N	PHE	B	159	7.441	54.080	42.826	1.00 70.60	N
ATOM	8502	CA	PHE	B	159	6.078	53.846	43.273	1.00 71.27	C
ATOM	8504	CB	PHE	B	159	5.883	53.920	44.813	1.00 69.71	C
ATOM	8507	CG	PHE	B	159	6.184	55.263	45.427	1.00 64.66	C
ATOM	8508	CD1	PHE	B	159	7.228	55.397	46.334	1.00 61.90	C
ATOM	8510	CE1	PHE	B	159	7.521	56.634	46.919	1.00 65.05	C
ATOM	8512	CZ	PHE	B	159	6.751	57.756	46.599	1.00 68.53	C
ATOM	8514	CE2	PHE	B	159	5.690	57.631	45.694	1.00 67.06	C
ATOM	8516	CD2	PHE	B	159	5.414	56.383	45.115	1.00 66.54	C
ATOM	8518	C	PHE	B	159	5.311	54.914	42.502	1.00 71.04	C
ATOM	8519	O	PHE	B	159	5.851	55.974	42.212	1.00 68.13	O
ATOM	8520	N	PRO	B	160	4.064	54.657	42.157	1.00 71.26	N
ATOM	8521	CA	PRO	B	160	3.361	55.586	41.283	1.00 72.10	C
ATOM	8523	CB	PRO	B	160	2.102	54.812	40.899	1.00 72.89	C

ATOM	8526	CG	PRO	B	160	2.325	53.429	41.341	1.00	71.93	C
ATOM	8529	CD	PRO	B	160	3.218	53.519	42.533	1.00	69.92	C
ATOM	8532	C	PRO	B	160	2.959	56.894	41.919	1.00	71.65	C
ATOM	8533	O	PRO	B	160	2.888	57.045	43.136	1.00	72.02	O
ATOM	8534	N	LEU	B	161	2.703	57.841	41.039	1.00	71.52	N
ATOM	8536	CA	LEU	B	161	2.108	59.104	41.403	1.00	75.59	C
ATOM	8538	CB	LEU	B	161	3.160	60.196	41.575	1.00	77.46	C
ATOM	8541	CG	LEU	B	161	4.493	59.938	42.269	1.00	78.23	C
ATOM	8543	CD1	LEU	B	161	5.608	60.398	41.338	1.00	78.97	C
ATOM	8547	CD2	LEU	B	161	4.570	60.663	43.611	1.00	75.00	C
ATOM	8551	C	LEU	B	161	1.177	59.500	40.252	1.00	76.43	C
ATOM	8552	O	LEU	B	161	1.492	59.322	39.071	1.00	79.99	O
ATOM	8553	N	GLN	B	162	0.016	60.022	40.584	1.00	75.26	N
ATOM	8555	CA	GLN	B	162	-0.853	60.579	39.563	1.00	75.96	C
ATOM	8557	CB	GLN	B	162	-2.266	60.698	40.126	1.00	75.84	C
ATOM	8560	CG	GLN	B	162	-2.314	61.141	41.592	1.00	72.01	C
ATOM	8563	CD	GLN	B	162	-1.628	62.471	41.822	1.00	71.95	C
ATOM	8564	OE1	GLN	B	162	-0.588	62.767	41.223	1.00	69.09	O
ATOM	8565	NE2	GLN	B	162	-2.203	63.281	42.696	1.00	72.77	N
ATOM	8568	C	GLN	B	162	-0.290	61.961	39.102	1.00	77.71	C
ATOM	8569	O	GLN	B	162	0.933	62.153	39.019	1.00	79.30	O
ATOM	8570	N	GLN	B	163	-1.163	62.919	38.811	1.00	74.89	N
ATOM	8572	CA	GLN	B	163	-0.706	64.215	38.347	1.00	76.31	C
ATOM	8574	CB	GLN	B	163	-1.665	64.799	37.275	1.00	74.58	C
ATOM	8577	CG	GLN	B	163	-1.457	66.276	36.955	1.00	75.98	C
ATOM	8580	CD	GLN	B	163	-1.774	66.679	35.491	1.00	78.50	C
ATOM	8581	OE1	GLN	B	163	-2.869	66.428	34.982	1.00	73.62	O
ATOM	8582	NE2	GLN	B	163	-0.797	67.316	34.828	1.00	77.14	N
ATOM	8585	C	GLN	B	163	-0.497	65.139	39.566	1.00	78.42	C
ATOM	8586	O	GLN	B	163	0.544	65.807	39.667	1.00	84.37	O
ATOM	8587	N	SER	B	164	-1.452	65.154	40.501	1.00	76.38	N
ATOM	8589	CA	SER	B	164	-1.369	66.023	41.690	1.00	73.78	C
ATOM	8591	CB	SER	B	164	-2.442	65.635	42.714	1.00	71.78	C
ATOM	8594	OG	SER	B	164	-2.807	66.743	43.533	1.00	71.79	O
ATOM	8596	C	SER	B	164	-0.014	65.965	42.395	1.00	76.38	C
ATOM	8597	O	SER	B	164	0.467	66.969	42.942	1.00	71.19	O
ATOM	8598	N	GLU	B	165	0.590	64.778	42.378	1.00	78.65	N
ATOM	8600	CA	GLU	B	165	1.805	64.521	43.125	1.00	82.23	C
ATOM	8602	CB	GLU	B	165	1.948	63.017	43.344	1.00	86.01	C
ATOM	8605	CG	GLU	B	165	0.848	62.399	44.201	1.00	88.14	C
ATOM	8608	CD	GLU	B	165	1.063	60.911	44.445	1.00	90.26	C
ATOM	8609	OE1	GLU	B	165	2.025	60.560	45.159	1.00	87.30	O
ATOM	8610	OE2	GLU	B	165	0.266	60.089	43.928	1.00	95.66	O
ATOM	8611	C	GLU	B	165	3.053	65.082	42.436	1.00	81.15	C
ATOM	8612	O	GLU	B	165	3.975	65.580	43.096	1.00	76.40	O
ATOM	8613	N	VAL	B	166	3.080	64.989	41.111	1.00	79.46	N
ATOM	8615	CA	VAL	B	166	4.196	65.532	40.338	1.00	77.43	C
ATOM	8617	CB	VAL	B	166	4.063	65.124	38.829	1.00	75.19	C
ATOM	8619	CG1	VAL	B	166	4.836	66.023	37.922	1.00	77.04	C
ATOM	8623	CG2	VAL	B	166	4.538	63.703	38.634	1.00	74.61	C
ATOM	8627	C	VAL	B	166	4.353	67.060	40.568	1.00	75.47	C
ATOM	8628	O	VAL	B	166	5.468	67.551	40.621	1.00	75.66	O
ATOM	8629	N	LEU	B	167	3.259	67.804	40.727	1.00	75.60	N
ATOM	8631	CA	LEU	B	167	3.348	69.261	40.931	1.00	75.68	C
ATOM	8633	CB	LEU	B	167	1.977	69.929	40.772	1.00	76.77	C
ATOM	8636	CG	LEU	B	167	1.248	69.774	39.430	1.00	80.17	C
ATOM	8638	CD1	LEU	B	167	-0.170	70.365	39.474	1.00	77.26	C

ATOM	8642	CD2	LEU	B	167	2.047	70.399	38.282	1.00	82.87	C
ATOM	8646	C	LEU	B	167	3.887	69.644	42.302	1.00	73.27	C
ATOM	8647	O	LEU	B	167	4.593	70.643	42.476	1.00	69.74	O
ATOM	8648	N	ALA	B	168	3.543	68.848	43.288	1.00	73.73	N
ATOM	8650	CA	ALA	B	168	3.962	69.147	44.636	1.00	77.27	C
ATOM	8652	CB	ALA	B	168	2.949	68.585	45.638	1.00	75.98	C
ATOM	8656	C	ALA	B	168	5.353	68.596	44.921	1.00	78.89	C
ATOM	8657	O	ALA	B	168	5.995	69.005	45.889	1.00	84.58	O
ATOM	8658	N	SER	B	169	5.832	67.688	44.083	1.00	76.97	N
ATOM	8660	CA	SER	B	169	7.094	67.029	44.373	1.00	77.52	C
ATOM	8662	CB	SER	B	169	6.858	65.549	44.637	1.00	80.08	C
ATOM	8665	OG	SER	B	169	5.612	65.396	45.312	1.00	83.47	O
ATOM	8667	C	SER	B	169	8.122	67.204	43.285	1.00	75.54	C
ATOM	8668	O	SER	B	169	7.817	67.604	42.162	1.00	69.75	O
ATOM	8669	N	VAL	B	170	9.355	66.890	43.658	1.00	74.47	N
ATOM	8671	CA	VAL	B	170	10.511	67.097	42.805	1.00	73.73	C
ATOM	8673	CB	VAL	B	170	11.777	67.421	43.675	1.00	72.68	C
ATOM	8675	CG1	VAL	B	170	13.078	67.140	42.959	1.00	74.83	C
ATOM	8679	CG2	VAL	B	170	11.755	68.881	44.098	1.00	72.94	C
ATOM	8683	C	VAL	B	170	10.654	65.893	41.861	1.00	71.65	C
ATOM	8684	O	VAL	B	170	9.950	64.866	42.012	1.00	75.35	O
ATOM	8685	N	GLY	B	171	11.525	66.035	40.863	1.00	64.10	N
ATOM	8687	CA	GLY	B	171	11.730	64.987	39.890	1.00	57.27	C
ATOM	8690	C	GLY	B	171	13.146	64.918	39.419	1.00	52.94	C
ATOM	8691	O	GLY	B	171	13.434	64.116	38.563	1.00	50.16	O
ATOM	8692	N	GLY	B	172	14.024	65.757	39.959	1.00	48.11	N
ATOM	8694	CA	GLY	B	172	15.412	65.704	39.591	1.00	48.37	C
ATOM	8697	C	GLY	B	172	15.975	67.066	39.249	1.00	51.80	C
ATOM	8698	O	GLY	B	172	15.357	68.102	39.524	1.00	54.56	O
ATOM	8699	N	SER	B	173	17.167	67.063	38.658	1.00	48.83	N
ATOM	8701	CA	SER	B	173	17.796	68.288	38.259	1.00	43.89	C
ATOM	8703	CB	SER	B	173	19.000	68.557	39.113	1.00	42.65	C
ATOM	8706	OG	SER	B	173	18.603	69.033	40.373	1.00	49.32	O
ATOM	8708	C	SER	B	173	18.297	68.264	36.864	1.00	44.21	C
ATOM	8709	O	SER	B	173	18.544	67.207	36.273	1.00	45.21	O
ATOM	8710	N	MET	B	174	18.432	69.476	36.356	1.00	43.20	N
ATOM	8712	CA	MET	B	174	19.138	69.725	35.148	1.00	43.58	C
ATOM	8714	CB	MET	B	174	18.184	70.144	34.044	1.00	43.84	C
ATOM	8717	CG	MET	B	174	18.971	70.650	32.883	1.00	46.91	C
ATOM	8720	SD	MET	B	174	18.074	70.998	31.472	1.00	53.60	S
ATOM	8721	CE	MET	B	174	17.365	72.553	31.872	1.00	56.75	C
ATOM	8725	C	MET	B	174	20.132	70.872	35.471	1.00	45.69	C
ATOM	8726	O	MET	B	174	19.721	72.028	35.575	1.00	45.35	O
ATOM	8727	N	ILE	B	175	21.418	70.577	35.650	1.00	41.84	N
ATOM	8729	CA	ILE	B	175	22.376	71.663	35.853	1.00	46.48	C
ATOM	8731	CB	ILE	B	175	23.548	71.295	36.811	1.00	47.95	C
ATOM	8733	CG1	ILE	B	175	23.105	70.444	37.989	1.00	46.56	C
ATOM	8736	CD1	ILE	B	175	22.250	71.153	38.942	1.00	46.76	C
ATOM	8740	CG2	ILE	B	175	24.168	72.567	37.289	1.00	45.43	C
ATOM	8744	C	ILE	B	175	22.986	72.113	34.524	1.00	44.88	C
ATOM	8745	O	ILE	B	175	23.615	71.333	33.802	1.00	48.63	O
ATOM	8746	N	ILE	B	176	22.815	73.385	34.216	1.00	51.15	N
ATOM	8748	CA	ILE	B	176	23.223	73.942	32.922	1.00	51.24	C
ATOM	8750	CB	ILE	B	176	22.198	74.980	32.470	1.00	51.72	C
ATOM	8752	CG1	ILE	B	176	20.833	74.369	32.300	1.00	45.30	C
ATOM	8755	CD1	ILE	B	176	20.454	74.362	30.860	1.00	49.64	C
ATOM	8759	CG2	ILE	B	176	22.621	75.606	31.135	1.00	53.65	C

ATOM	8763	C	ILE	B	176	24.558	74.647	33.020	1.00	50.93	C
ATOM	8764	O	ILE	B	176	24.648	75.704	33.620	1.00	52.76	O
ATOM	8765	N	GLY	B	177	25.584	74.065	32.413	1.00	53.67	N
ATOM	8767	CA	GLY	B	177	26.921	74.625	32.462	1.00	52.15	C
ATOM	8770	C	GLY	B	177	27.839	74.139	33.561	1.00	48.67	C
ATOM	8771	O	GLY	B	177	28.832	74.776	33.795	1.00	52.76	O
ATOM	8772	N	GLY	B	178	27.538	73.029	34.224	1.00	51.24	N
ATOM	8774	CA	GLY	B	178	28.406	72.536	35.293	1.00	51.26	C
ATOM	8777	C	GLY	B	178	28.016	71.184	35.886	1.00	52.43	C
ATOM	8778	O	GLY	B	178	27.068	70.577	35.440	1.00	59.00	O
ATOM	8779	N	ILE	B	179	28.730	70.717	36.903	1.00	50.07	N
ATOM	8781	CA	ILE	B	179	28.446	69.433	37.512	1.00	45.67	C
ATOM	8783	CB	ILE	B	179	29.610	68.519	37.252	1.00	47.32	C
ATOM	8785	CG1	ILE	B	179	29.842	68.357	35.761	1.00	49.07	C
ATOM	8788	CD1	ILE	B	179	31.133	67.633	35.429	1.00	45.35	C
ATOM	8792	CG2	ILE	B	179	29.350	67.174	37.842	1.00	48.87	C
ATOM	8796	C	ILE	B	179	28.271	69.601	39.024	1.00	46.31	C
ATOM	8797	O	ILE	B	179	29.115	70.203	39.691	1.00	48.40	O
ATOM	8798	N	ASP	B	180	27.199	69.060	39.581	1.00	45.06	N
ATOM	8800	CA	ASP	B	180	26.925	69.265	40.996	1.00	46.20	C
ATOM	8802	CB	ASP	B	180	25.489	69.733	41.193	1.00	48.62	C
ATOM	8805	CG	ASP	B	180	25.183	70.143	42.644	1.00	50.85	C
ATOM	8806	OD1	ASP	B	180	25.059	71.353	42.922	1.00	46.55	O
ATOM	8807	OD2	ASP	B	180	25.034	69.324	43.579	1.00	57.84	O
ATOM	8808	C	ASP	B	180	27.169	68.037	41.828	1.00	46.31	C
ATOM	8809	O	ASP	B	180	26.308	67.217	41.996	1.00	52.16	O
ATOM	8810	N	HIS	B	181	28.377	67.942	42.351	1.00	51.89	N
ATOM	8812	CA	HIS	B	181	28.831	66.897	43.277	1.00	50.52	C
ATOM	8814	CB	HIS	B	181	29.990	67.496	44.061	1.00	50.18	C
ATOM	8817	CG	HIS	B	181	31.190	67.731	43.220	1.00	60.85	C
ATOM	8818	ND1	HIS	B	181	32.309	68.400	43.673	1.00	67.21	N
ATOM	8820	CE1	HIS	B	181	33.207	68.450	42.704	1.00	70.69	C
ATOM	8822	NE2	HIS	B	181	32.708	67.841	41.639	1.00	75.54	N
ATOM	8824	CD2	HIS	B	181	31.447	67.381	41.936	1.00	67.45	C
ATOM	8826	C	HIS	B	181	27.858	66.226	44.276	1.00	48.76	C
ATOM	8827	O	HIS	B	181	28.090	65.086	44.671	1.00	50.74	O
ATOM	8828	N	SER	B	182	26.797	66.891	44.718	1.00	47.39	N
ATOM	8830	CA	SER	B	182	25.899	66.216	45.653	1.00	47.06	C
ATOM	8832	CB	SER	B	182	25.005	67.213	46.359	1.00	44.50	C
ATOM	8835	OG	SER	B	182	24.325	67.978	45.398	1.00	49.42	O
ATOM	8837	C	SER	B	182	25.041	65.202	44.909	1.00	44.21	C
ATOM	8838	O	SER	B	182	24.473	64.259	45.490	1.00	42.19	O
ATOM	8839	N	LEU	B	183	24.941	65.377	43.611	1.00	35.22	N
ATOM	8841	CA	LEU	B	183	24.017	64.548	42.910	1.00	34.72	C
ATOM	8843	CB	LEU	B	183	23.541	65.242	41.625	1.00	37.22	C
ATOM	8846	CG	LEU	B	183	23.060	66.693	41.814	1.00	35.27	C
ATOM	8848	CD1	LEU	B	183	22.723	67.333	40.490	1.00	35.13	C
ATOM	8852	CD2	LEU	B	183	21.845	66.772	42.757	1.00	39.21	C
ATOM	8856	C	LEU	B	183	24.581	63.170	42.659	1.00	34.54	C
ATOM	8857	O	LEU	B	183	23.893	62.348	42.140	1.00	32.68	O
ATOM	8858	N	TYR	B	184	25.814	62.867	43.032	1.00	40.53	N
ATOM	8860	CA	TYR	B	184	26.304	61.495	42.751	1.00	40.17	C
ATOM	8862	CB	TYR	B	184	26.806	61.441	41.320	1.00	42.80	C
ATOM	8865	CG	TYR	B	184	28.109	62.182	41.128	1.00	39.74	C
ATOM	8866	CD1	TYR	B	184	28.111	63.548	40.992	1.00	37.66	C
ATOM	8868	CE1	TYR	B	184	29.253	64.256	40.803	1.00	37.61	C
ATOM	8870	CZ	TYR	B	184	30.456	63.621	40.763	1.00	47.41	C

ATOM	8871	OH	TYR	B	184	31.576	64.426	40.581	1.00	55.00	O
ATOM	8873	CE2	TYR	B	184	30.520	62.236	40.906	1.00	43.25	C
ATOM	8875	CD2	TYR	B	184	29.322	61.520	41.083	1.00	41.71	C
ATOM	8877	C	TYR	B	184	27.436	60.952	43.634	1.00	41.79	C
ATOM	8878	O	TYR	B	184	28.095	61.684	44.365	1.00	46.68	O
ATOM	8879	N	THR	B	185	27.686	59.655	43.536	1.00	43.21	N
ATOM	8881	CA	THR	B	185	28.744	59.045	44.328	1.00	44.21	C
ATOM	8883	CB	THR	B	185	28.163	58.164	45.366	1.00	44.37	C
ATOM	8885	OG1	THR	B	185	27.282	57.235	44.714	1.00	55.13	O
ATOM	8887	CG2	THR	B	185	27.257	58.969	46.275	1.00	43.63	C
ATOM	8891	C	THR	B	185	29.676	58.215	43.499	1.00	43.25	C
ATOM	8892	O	THR	B	185	29.280	57.701	42.428	1.00	41.22	O
ATOM	8893	N	GLY	B	186	30.912	58.084	44.009	1.00	36.99	N
ATOM	8895	CA	GLY	B	186	31.934	57.353	43.311	1.00	37.15	C
ATOM	8898	C	GLY	B	186	32.359	58.174	42.111	1.00	39.52	C
ATOM	8899	O	GLY	B	186	31.993	59.309	41.970	1.00	41.98	O
ATOM	8900	N	SER	B	187	33.106	57.606	41.199	1.00	41.91	N
ATOM	8902	CA	SER	B	187	33.702	58.455	40.213	1.00	43.54	C
ATOM	8904	CB	SER	B	187	35.132	57.957	39.931	1.00	49.17	C
ATOM	8907	OG	SER	B	187	35.905	57.864	41.143	1.00	51.70	O
ATOM	8909	C	SER	B	187	32.906	58.552	38.968	1.00	38.74	C
ATOM	8910	O	SER	B	187	32.171	57.665	38.677	1.00	44.27	O
ATOM	8911	N	LEU	B	188	33.054	59.649	38.236	1.00	36.60	N
ATOM	8913	CA	LEU	B	188	32.451	59.779	36.908	1.00	36.77	C
ATOM	8915	CB	LEU	B	188	32.452	61.247	36.480	1.00	29.29	C
ATOM	8918	CG	LEU	B	188	31.170	62.059	36.695	1.00	26.22	C
ATOM	8920	CD1	LEU	B	188	31.400	63.517	36.419	1.00	31.52	C
ATOM	8924	CD2	LEU	B	188	30.078	61.647	35.819	1.00	28.00	C
ATOM	8928	C	LEU	B	188	33.233	59.037	35.839	1.00	37.01	C
ATOM	8929	O	LEU	B	188	34.379	59.346	35.689	1.00	42.16	O
ATOM	8930	N	TRP	B	189	32.622	58.095	35.096	1.00	44.14	N
ATOM	8932	CA	TRP	B	189	33.225	57.450	33.888	1.00	40.20	C
ATOM	8934	CB	TRP	B	189	33.043	55.957	33.873	1.00	42.63	C
ATOM	8937	CG	TRP	B	189	33.929	55.247	34.839	1.00	44.06	C
ATOM	8938	CD1	TRP	B	189	33.638	54.972	36.099	1.00	38.39	C
ATOM	8940	NE1	TRP	B	189	34.685	54.319	36.695	1.00	45.18	N
ATOM	8942	CE2	TRP	B	189	35.687	54.158	35.787	1.00	44.17	C
ATOM	8943	CD2	TRP	B	189	35.248	54.733	34.600	1.00	44.91	C
ATOM	8944	CE3	TRP	B	189	36.102	54.699	33.487	1.00	53.36	C
ATOM	8946	CZ3	TRP	B	189	37.351	54.090	33.618	1.00	52.20	C
ATOM	8948	CH2	TRP	B	189	37.752	53.528	34.833	1.00	50.78	C
ATOM	8950	CZ2	TRP	B	189	36.938	53.549	35.923	1.00	50.20	C
ATOM	8952	C	TRP	B	189	32.610	57.975	32.572	1.00	43.79	C
ATOM	8953	O	TRP	B	189	31.391	58.184	32.480	1.00	46.26	O
ATOM	8954	N	TYR	B	190	33.469	58.151	31.560	1.00	42.68	N
ATOM	8956	CA	TYR	B	190	33.154	58.828	30.296	1.00	39.84	C
ATOM	8958	CB	TYR	B	190	34.052	60.070	30.215	1.00	36.42	C
ATOM	8961	CG	TYR	B	190	33.685	61.270	31.080	1.00	33.81	C
ATOM	8962	CD1	TYR	B	190	34.442	61.624	32.172	1.00	37.07	C
ATOM	8964	CE1	TYR	B	190	34.111	62.703	32.935	1.00	42.72	C
ATOM	8966	CZ	TYR	B	190	32.992	63.450	32.590	1.00	45.10	C
ATOM	8967	OH	TYR	B	190	32.601	64.565	33.313	1.00	53.55	O
ATOM	8969	CE2	TYR	B	190	32.255	63.102	31.516	1.00	30.96	C
ATOM	8971	CD2	TYR	B	190	32.597	62.043	30.775	1.00	33.25	C
ATOM	8973	C	TYR	B	190	33.386	58.066	28.964	1.00	38.96	C
ATOM	8974	O	TYR	B	190	34.524	57.748	28.621	1.00	51.45	O
ATOM	8975	N	THR	B	191	32.312	57.822	28.210	1.00	47.13	N

ATOM	8977	CA	THR	B	191	32.398	57.242	26.864	1.00	47.27	C
ATOM	8979	CB	THR	B	191	31.143	56.433	26.566	1.00	47.24	C
ATOM	8981	OG1	THR	B	191	31.383	55.461	25.550	1.00	50.31	O
ATOM	8983	CG2	THR	B	191	30.100	57.286	25.966	1.00	48.46	C
ATOM	8987	C	THR	B	191	32.464	58.404	25.872	1.00	51.71	C
ATOM	8988	O	THR	B	191	31.924	59.462	26.120	1.00	56.58	O
ATOM	8989	N	PRO	B	192	33.116	58.236	24.741	1.00	54.66	N
ATOM	8990	CA	PRO	B	192	33.183	59.339	23.783	1.00	53.51	C
ATOM	8992	CB	PRO	B	192	34.249	58.903	22.788	1.00	53.85	C
ATOM	8995	CG	PRO	B	192	34.716	57.512	23.244	1.00	56.15	C
ATOM	8998	CD	PRO	B	192	33.802	57.022	24.282	1.00	54.11	C
ATOM	9001	C	PRO	B	192	31.875	59.435	23.058	1.00	53.29	C
ATOM	9002	O	PRO	B	192	31.105	58.500	23.175	1.00	48.91	O
ATOM	9003	N	ILE	B	193	31.654	60.547	22.351	1.00	53.07	N
ATOM	9005	CA	ILE	B	193	30.506	60.753	21.490	1.00	47.51	C
ATOM	9007	CB	ILE	B	193	29.967	62.149	21.619	1.00	53.03	C
ATOM	9009	CG1	ILE	B	193	29.103	62.310	22.871	1.00	53.04	C
ATOM	9012	CD1	ILE	B	193	28.952	63.742	23.319	1.00	53.15	C
ATOM	9016	CG2	ILE	B	193	29.109	62.457	20.421	1.00	53.72	C
ATOM	9020	C	ILE	B	193	31.029	60.603	20.091	1.00	50.01	C
ATOM	9021	O	ILE	B	193	31.857	61.413	19.615	1.00	45.74	O
ATOM	9022	N	ARG	B	194	30.519	59.566	19.442	1.00	49.20	N
ATOM	9024	CA	ARG	B	194	30.954	59.093	18.139	1.00	48.45	C
ATOM	9026	CB	ARG	B	194	30.161	57.826	17.861	1.00	46.41	C
ATOM	9029	CG	ARG	B	194	30.797	56.851	16.901	1.00	47.20	C
ATOM	9032	CD	ARG	B	194	29.735	56.067	16.153	1.00	43.61	C
ATOM	9035	NE	ARG	B	194	30.326	55.148	15.205	1.00	44.33	N
ATOM	9037	CZ	ARG	B	194	29.624	54.477	14.301	1.00	45.08	C
ATOM	9038	NH1	ARG	B	194	28.331	54.639	14.241	1.00	42.10	N
ATOM	9041	NH2	ARG	B	194	30.207	53.647	13.452	1.00	44.38	N
ATOM	9044	C	ARG	B	194	30.740	60.071	16.978	1.00	55.22	C
ATOM	9045	O	ARG	B	194	31.503	60.047	15.987	1.00	56.72	O
ATOM	9046	N	ARG	B	195	29.696	60.906	17.113	1.00	57.00	N
ATOM	9048	CA	ARG	B	195	29.244	61.865	16.087	1.00	53.97	C
ATOM	9050	CB	ARG	B	195	28.412	61.171	15.017	1.00	55.76	C
ATOM	9053	CG	ARG	B	195	28.550	61.762	13.630	1.00	60.64	C
ATOM	9056	CD	ARG	B	195	27.234	61.923	12.849	1.00	60.09	C
ATOM	9059	NE	ARG	B	195	26.847	60.696	12.164	1.00	64.82	N
ATOM	9061	CZ	ARG	B	195	26.074	60.632	11.079	1.00	66.70	C
ATOM	9062	NH1	ARG	B	195	25.572	61.735	10.520	1.00	66.60	N
ATOM	9065	NH2	ARG	B	195	25.799	59.444	10.549	1.00	67.97	N
ATOM	9068	C	ARG	B	195	28.326	62.857	16.769	1.00	52.68	C
ATOM	9069	O	ARG	B	195	27.499	62.483	17.605	1.00	48.21	O
ATOM	9070	N	GLU	B	196	28.455	64.127	16.440	1.00	48.78	N
ATOM	9072	CA	GLU	B	196	27.569	65.071	17.046	1.00	48.32	C
ATOM	9074	CB	GLU	B	196	28.199	66.421	17.091	1.00	47.83	C
ATOM	9077	CG	GLU	B	196	29.399	66.401	17.960	1.00	48.63	C
ATOM	9080	CD	GLU	B	196	30.197	67.634	17.756	1.00	47.85	C
ATOM	9081	OE1	GLU	B	196	31.098	67.524	16.899	1.00	45.46	O
ATOM	9082	OE2	GLU	B	196	29.909	68.667	18.442	1.00	49.47	O
ATOM	9083	C	GLU	B	196	26.332	65.193	16.240	1.00	48.04	C
ATOM	9084	O	GLU	B	196	26.225	66.119	15.433	1.00	51.46	O
ATOM	9085	N	TRP	B	197	25.402	64.269	16.438	1.00	43.41	N
ATOM	9087	CA	TRP	B	197	24.115	64.382	15.786	1.00	42.70	C
ATOM	9089	CB	TRP	B	197	24.013	63.512	14.546	1.00	42.18	C
ATOM	9092	CG	TRP	B	197	24.166	62.015	14.631	1.00	44.56	C
ATOM	9093	CD1	TRP	B	197	25.015	61.311	15.385	1.00	48.17	C

ATOM	9095	NE1	TRP	B	197	24.855	59.961	15.166	1.00	44.01	N
ATOM	9097	CE2	TRP	B	197	23.874	59.782	14.237	1.00	41.09	C
ATOM	9098	CD2	TRP	B	197	23.417	61.054	13.872	1.00	47.74	C
ATOM	9099	CE3	TRP	B	197	22.389	61.153	12.917	1.00	49.53	C
ATOM	9101	CZ3	TRP	B	197	21.865	59.993	12.371	1.00	47.08	C
ATOM	9103	CH2	TRP	B	197	22.353	58.744	12.763	1.00	51.98	C
ATOM	9105	CZ2	TRP	B	197	23.361	58.622	13.696	1.00	41.61	C
ATOM	9107	C	TRP	B	197	23.112	64.138	16.888	1.00	41.55	C
ATOM	9108	O	TRP	B	197	22.746	65.084	17.582	1.00	42.56	O
ATOM	9109	N	TYR	B	198	22.672	62.900	17.075	1.00	42.61	N
ATOM	9111	CA	TYR	B	198	22.025	62.545	18.329	1.00	41.33	C
ATOM	9113	CB	TYR	B	198	21.459	61.157	18.244	1.00	41.19	C
ATOM	9116	CG	TYR	B	198	20.254	61.024	17.390	1.00	39.49	C
ATOM	9117	CD1	TYR	B	198	19.012	61.248	17.911	1.00	39.50	C
ATOM	9119	CE1	TYR	B	198	17.901	61.130	17.152	1.00	38.38	C
ATOM	9121	CZ	TYR	B	198	18.010	60.768	15.848	1.00	37.08	C
ATOM	9122	OH	TYR	B	198	16.880	60.654	15.099	1.00	33.61	O
ATOM	9124	CE2	TYR	B	198	19.229	60.528	15.293	1.00	42.60	C
ATOM	9126	CD2	TYR	B	198	20.356	60.661	16.074	1.00	43.81	C
ATOM	9128	C	TYR	B	198	23.182	62.519	19.341	1.00	40.43	C
ATOM	9129	O	TYR	B	198	24.272	62.908	18.991	1.00	47.49	O
ATOM	9130	N	TYR	B	199	22.981	62.088	20.584	1.00	38.21	N
ATOM	9132	CA	TYR	B	199	24.128	61.846	21.436	1.00	35.93	C
ATOM	9134	CB	TYR	B	199	23.802	62.177	22.865	1.00	39.90	C
ATOM	9137	CG	TYR	B	199	23.751	63.668	23.174	1.00	43.36	C
ATOM	9138	CD1	TYR	B	199	22.570	64.349	23.130	1.00	39.75	C
ATOM	9140	CE1	TYR	B	199	22.500	65.679	23.408	1.00	42.44	C
ATOM	9142	CZ	TYR	B	199	23.616	66.367	23.741	1.00	46.22	C
ATOM	9143	OH	TYR	B	199	23.499	67.707	24.010	1.00	44.65	O
ATOM	9145	CE2	TYR	B	199	24.832	65.726	23.794	1.00	48.47	C
ATOM	9147	CD2	TYR	B	199	24.894	64.379	23.509	1.00	44.07	C
ATOM	9149	C	TYR	B	199	24.366	60.365	21.226	1.00	42.71	C
ATOM	9150	O	TYR	B	199	23.584	59.507	21.710	1.00	43.87	O
ATOM	9151	N	GLU	B	200	25.422	60.033	20.481	1.00	43.77	N
ATOM	9153	CA	GLU	B	200	25.573	58.653	19.995	1.00	42.26	C
ATOM	9155	CB	GLU	B	200	25.609	58.566	18.475	1.00	37.46	C
ATOM	9158	CG	GLU	B	200	25.766	57.159	17.955	1.00	37.24	C
ATOM	9161	CD	GLU	B	200	26.297	57.077	16.511	1.00	51.42	C
ATOM	9162	OE1	GLU	B	200	26.309	58.100	15.756	1.00	59.01	O
ATOM	9163	OE2	GLU	B	200	26.707	55.969	16.101	1.00	50.91	O
ATOM	9164	C	GLU	B	200	26.810	58.089	20.527	1.00	46.93	C
ATOM	9165	O	GLU	B	200	27.810	58.766	20.484	1.00	48.35	O
ATOM	9166	N	VAL	B	201	26.703	56.841	21.021	1.00	52.84	N
ATOM	9168	CA	VAL	B	201	27.773	56.090	21.669	1.00	48.82	C
ATOM	9170	CB	VAL	B	201	27.515	55.969	23.163	1.00	51.19	C
ATOM	9172	CG1	VAL	B	201	27.484	57.332	23.864	1.00	51.45	C
ATOM	9176	CG2	VAL	B	201	26.230	55.280	23.383	1.00	48.19	C
ATOM	9180	C	VAL	B	201	27.783	54.659	21.166	1.00	50.01	C
ATOM	9181	O	VAL	B	201	26.965	54.283	20.341	1.00	54.12	O
ATOM	9182	N	ILE	B	202	28.701	53.858	21.702	1.00	49.72	N
ATOM	9184	CA	ILE	B	202	28.945	52.497	21.257	1.00	45.16	C
ATOM	9186	CB	ILE	B	202	30.262	52.442	20.484	1.00	46.37	C
ATOM	9188	CG1	ILE	B	202	30.075	52.858	19.028	1.00	47.26	C
ATOM	9191	CD1	ILE	B	202	31.097	53.824	18.585	1.00	51.48	C
ATOM	9195	CG2	ILE	B	202	30.727	51.098	20.431	1.00	39.79	C
ATOM	9199	C	ILE	B	202	29.052	51.546	22.401	1.00	42.02	C
ATOM	9200	O	ILE	B	202	29.706	51.788	23.359	1.00	44.16	O

ATOM	9201	N	ILE	B	203	28.429	50.423	22.252	1.00 42.56	N
ATOM	9203	CA	ILE	B	203	28.259	49.497	23.327	1.00 45.31	C
ATOM	9205	CB	ILE	B	203	26.823	49.150	23.567	1.00 43.41	C
ATOM	9207	CG1	ILE	B	203	26.040	50.325	24.088	1.00 41.62	C
ATOM	9210	CD1	ILE	B	203	24.600	49.972	24.158	1.00 42.16	C
ATOM	9214	CG2	ILE	B	203	26.780	48.073	24.599	1.00 44.28	C
ATOM	9218	C	ILE	B	203	28.888	48.250	22.866	1.00 49.14	C
ATOM	9219	O	ILE	B	203	28.537	47.712	21.806	1.00 47.82	O
ATOM	9220	N	VAL	B	204	29.782	47.762	23.696	1.00 49.32	N
ATOM	9222	CA	VAL	B	204	30.610	46.689	23.294	1.00 48.88	C
ATOM	9224	CB	VAL	B	204	31.996	47.004	23.720	1.00 45.35	C
ATOM	9226	CG1	VAL	B	204	32.441	48.273	23.012	1.00 49.69	C
ATOM	9230	CG2	VAL	B	204	32.055	47.203	25.163	1.00 44.93	C
ATOM	9234	C	VAL	B	204	30.179	45.382	23.866	1.00 51.35	C
ATOM	9235	O	VAL	B	204	30.565	44.349	23.337	1.00 57.30	O
ATOM	9236	N	ARG	B	205	29.392	45.397	24.941	1.00 50.88	N
ATOM	9238	CA	ARG	B	205	29.044	44.122	25.568	1.00 52.74	C
ATOM	9240	CB	ARG	B	205	30.299	43.498	26.174	1.00 52.53	C
ATOM	9243	CG	ARG	B	205	30.064	42.536	27.318	1.00 54.44	C
ATOM	9246	CD	ARG	B	205	31.354	41.863	27.754	1.00 56.13	C
ATOM	9249	NE	ARG	B	205	31.296	41.266	29.087	1.00 59.87	N
ATOM	9251	CZ	ARG	B	205	31.742	40.048	29.378	1.00 59.78	C
ATOM	9252	NH1	ARG	B	205	32.275	39.296	28.429	1.00 58.07	N
ATOM	9255	NH2	ARG	B	205	31.657	39.585	30.618	1.00 61.85	N
ATOM	9258	C	ARG	B	205	27.953	44.177	26.605	1.00 50.44	C
ATOM	9259	O	ARG	B	205	28.004	44.985	27.512	1.00 60.70	O
ATOM	9260	N	VAL	B	206	26.972	43.298	26.455	1.00 48.83	N
ATOM	9262	CA	VAL	B	206	25.846	43.189	27.373	1.00 48.98	C
ATOM	9264	CB	VAL	B	206	24.544	43.113	26.609	1.00 47.56	C
ATOM	9266	CG1	VAL	B	206	23.429	42.948	27.571	1.00 51.41	C
ATOM	9270	CG2	VAL	B	206	24.310	44.358	25.719	1.00 47.81	C
ATOM	9274	C	VAL	B	206	25.931	41.888	28.204	1.00 49.62	C
ATOM	9275	O	VAL	B	206	26.324	40.839	27.707	1.00 51.17	O
ATOM	9276	N	GLU	B	207	25.549	41.972	29.466	1.00 48.53	N
ATOM	9278	CA	GLU	B	207	25.511	40.846	30.346	1.00 50.25	C
ATOM	9280	CB	GLU	B	207	26.588	40.933	31.415	1.00 50.16	C
ATOM	9283	CG	GLU	B	207	27.966	40.533	30.976	1.00 49.74	C
ATOM	9286	CD	GLU	B	207	28.971	40.942	32.003	1.00 49.93	C
ATOM	9287	OE1	GLU	B	207	28.551	41.333	33.115	1.00 53.30	O
ATOM	9288	OE2	GLU	B	207	30.168	40.887	31.697	1.00 51.43	O
ATOM	9289	C	GLU	B	207	24.194	40.846	31.063	1.00 53.82	C
ATOM	9290	O	GLU	B	207	23.625	41.879	31.314	1.00 53.60	O
ATOM	9291	N	ILE	B	208	23.715	39.664	31.408	1.00 56.66	N
ATOM	9293	CA	ILE	B	208	22.535	39.565	32.224	1.00 54.83	C
ATOM	9295	CB	ILE	B	208	21.422	38.952	31.434	1.00 55.18	C
ATOM	9297	CG1	ILE	B	208	21.118	39.839	30.212	1.00 56.27	C
ATOM	9300	CD1	ILE	B	208	20.393	41.124	30.503	1.00 49.77	C
ATOM	9304	CG2	ILE	B	208	20.205	38.785	32.309	1.00 57.22	C
ATOM	9308	C	ILE	B	208	22.955	38.724	33.429	1.00 57.88	C
ATOM	9309	O	ILE	B	208	23.347	37.560	33.302	1.00 57.17	O
ATOM	9310	N	ASN	B	209	22.883	39.337	34.603	1.00 54.93	N
ATOM	9312	CA	ASN	B	209	23.319	38.694	35.835	1.00 56.25	C
ATOM	9314	CB	ASN	B	209	22.270	37.722	36.372	1.00 54.61	C
ATOM	9317	CG	ASN	B	209	21.639	38.210	37.663	1.00 55.46	C
ATOM	9318	OD1	ASN	B	209	21.992	39.277	38.187	1.00 50.67	O
ATOM	9319	ND2	ASN	B	209	20.695	37.428	38.189	1.00 53.95	N
ATOM	9322	C	ASN	B	209	24.668	38.015	35.668	1.00 52.94	C

ATOM	9323	O	ASN	B	209	24.881	36.887	36.076	1.00 47.18	O
ATOM	9324	N	GLY	B	210	25.581	38.741	35.055	1.00 51.75	N
ATOM	9326	CA	GLY	B	210	26.943	38.274	34.887	1.00 47.80	C
ATOM	9329	C	GLY	B	210	27.140	37.488	33.626	1.00 46.54	C
ATOM	9330	O	GLY	B	210	28.279	37.328	33.187	1.00 40.63	O
ATOM	9331	N	GLN	B	211	26.035	37.004	33.051	1.00 50.65	N
ATOM	9333	CA	GLN	B	211	26.080	36.138	31.863	1.00 53.20	C
ATOM	9335	CB	GLN	B	211	24.983	35.077	31.888	1.00 52.67	C
ATOM	9338	CG	GLN	B	211	24.850	34.430	30.515	1.00 63.08	C
ATOM	9341	CD	GLN	B	211	24.441	32.964	30.550	1.00 65.01	C
ATOM	9342	OE1	GLN	B	211	23.518	32.591	31.263	1.00 67.35	O
ATOM	9343	NE2	GLN	B	211	25.123	32.142	29.767	1.00 70.29	N
ATOM	9346	C	GLN	B	211	25.986	36.886	30.522	1.00 54.37	C
ATOM	9347	O	GLN	B	211	24.946	37.452	30.180	1.00 54.93	O
ATOM	9348	N	ASP	B	212	27.098	36.852	29.788	1.00 52.76	N
ATOM	9350	CA	ASP	B	212	27.269	37.451	28.466	1.00 56.79	C
ATOM	9352	CB	ASP	B	212	28.662	37.038	27.957	1.00 54.29	C
ATOM	9355	CG	ASP	B	212	29.016	37.650	26.623	1.00 63.19	C
ATOM	9356	OD1	ASP	B	212	28.177	38.399	26.067	1.00 70.42	O
ATOM	9357	OD2	ASP	B	212	30.120	37.448	26.044	1.00 67.39	O
ATOM	9358	C	ASP	B	212	26.189	37.063	27.435	1.00 61.19	C
ATOM	9359	O	ASP	B	212	25.844	35.877	27.280	1.00 54.41	O
ATOM	9360	N	LEU	B	213	25.680	38.092	26.738	1.00 62.11	N
ATOM	9362	CA	LEU	B	213	24.673	37.937	25.688	1.00 61.19	C
ATOM	9364	CB	LEU	B	213	24.155	39.306	25.248	1.00 62.39	C
ATOM	9367	CG	LEU	B	213	22.628	39.359	25.155	1.00 58.53	C
ATOM	9369	CD1	LEU	B	213	22.077	38.183	25.895	1.00 57.55	C
ATOM	9373	CD2	LEU	B	213	22.041	40.662	25.697	1.00 55.91	C
ATOM	9377	C	LEU	B	213	25.319	37.210	24.534	1.00 63.18	C
ATOM	9378	O	LEU	B	213	24.671	36.470	23.794	1.00 57.02	O
ATOM	9379	N	LYS	B	214	26.619	37.447	24.387	1.00 66.53	N
ATOM	9381	CA	LYS	B	214	27.466	36.603	23.539	1.00 70.91	C
ATOM	9383	CB	LYS	B	214	27.309	35.139	23.941	1.00 69.78	C
ATOM	9386	CG	LYS	B	214	28.397	34.242	23.410	1.00 71.78	C
ATOM	9389	CD	LYS	B	214	28.266	32.838	23.992	1.00 72.93	C
ATOM	9392	CE	LYS	B	214	28.927	31.796	23.116	1.00 70.34	C
ATOM	9395	NZ	LYS	B	214	27.903	31.146	22.264	1.00 64.34	N
ATOM	9399	C	LYS	B	214	27.143	36.780	22.072	1.00 73.22	C
ATOM	9400	O	LYS	B	214	27.246	35.850	21.251	1.00 66.62	O
ATOM	9401	N	MET	B	215	26.757	38.011	21.774	1.00 75.18	N
ATOM	9403	CA	MET	B	215	26.432	38.407	20.440	1.00 73.26	C
ATOM	9405	CB	MET	B	215	25.290	39.408	20.449	1.00 72.49	C
ATOM	9408	CG	MET	B	215	23.998	38.728	20.268	1.00 72.86	C
ATOM	9411	SD	MET	B	215	22.683	39.755	20.640	1.00 75.68	S
ATOM	9412	CE	MET	B	215	21.602	39.194	19.427	1.00 75.77	C
ATOM	9416	C	MET	B	215	27.642	39.092	19.959	1.00 73.98	C
ATOM	9417	O	MET	B	215	28.518	39.477	20.760	1.00 71.14	O
ATOM	9418	N	ASP	B	216	27.691	39.237	18.644	1.00 72.78	N
ATOM	9420	CA	ASP	B	216	28.719	40.037	18.037	1.00 71.14	C
ATOM	9422	CB	ASP	B	216	28.767	39.744	16.540	1.00 71.31	C
ATOM	9425	CG	ASP	B	216	29.577	40.749	15.771	1.00 74.43	C
ATOM	9426	OD1	ASP	B	216	30.271	41.594	16.394	1.00 80.47	O
ATOM	9427	OD2	ASP	B	216	29.584	40.763	14.524	1.00 72.09	O
ATOM	9428	C	ASP	B	216	28.186	41.415	18.401	1.00 68.29	C
ATOM	9429	O	ASP	B	216	26.983	41.655	18.318	1.00 62.61	O
ATOM	9430	N	CYS	B	217	29.061	42.308	18.831	1.00 68.51	N
ATOM	9432	CA	CYS	B	217	28.625	43.609	19.316	1.00 68.58	C

ATOM	9434	CB	CYS	B	217	29.795	44.285	19.994	1.00	68.63	C
ATOM	9437	SG	CYS	B	217	31.286	44.299	18.997	1.00	74.46	S
ATOM	9438	C	CYS	B	217	28.007	44.565	18.282	1.00	70.29	C
ATOM	9439	O	CYS	B	217	27.287	45.509	18.640	1.00	68.93	O
ATOM	9440	N	LYS	B	218	28.244	44.334	17.002	1.00	71.63	N
ATOM	9442	CA	LYS	B	218	27.750	45.284	16.014	1.00	70.37	C
ATOM	9444	CB	LYS	B	218	28.259	44.933	14.611	1.00	71.99	C
ATOM	9447	CG	LYS	B	218	29.041	46.076	13.943	1.00	76.53	C
ATOM	9450	CD	LYS	B	218	29.452	45.730	12.496	1.00	80.60	C
ATOM	9453	CE	LYS	B	218	30.493	46.715	11.896	1.00	83.08	C
ATOM	9456	NZ	LYS	B	218	31.690	46.955	12.763	1.00	84.11	N
ATOM	9460	C	LYS	B	218	26.229	45.322	16.063	1.00	66.79	C
ATOM	9461	O	LYS	B	218	25.578	46.202	15.509	1.00	63.62	O
ATOM	9462	N	GLU	B	219	25.659	44.352	16.743	1.00	64.08	N
ATOM	9464	CA	GLU	B	219	24.222	44.244	16.800	1.00	66.34	C
ATOM	9466	CB	GLU	B	219	23.839	42.798	17.059	1.00	69.58	C
ATOM	9469	CG	GLU	B	219	24.551	41.798	16.166	1.00	71.88	C
ATOM	9472	CD	GLU	B	219	23.800	41.529	14.875	1.00	78.40	C
ATOM	9473	OE1	GLU	B	219	22.637	42.002	14.721	1.00	72.86	O
ATOM	9474	OE2	GLU	B	219	24.389	40.835	14.009	1.00	85.55	O
ATOM	9475	C	GLU	B	219	23.691	45.065	17.931	1.00	65.05	C
ATOM	9476	O	GLU	B	219	22.528	45.438	17.961	1.00	63.97	O
ATOM	9477	N	TYR	B	220	24.550	45.342	18.888	1.00	65.15	N
ATOM	9479	CA	TYR	B	220	24.080	45.993	20.070	1.00	62.09	C
ATOM	9481	CB	TYR	B	220	25.134	45.900	21.179	1.00	62.12	C
ATOM	9484	CG	TYR	B	220	25.409	44.536	21.845	1.00	56.86	C
ATOM	9485	CD1	TYR	B	220	26.716	44.158	22.123	1.00	60.11	C
ATOM	9487	CE1	TYR	B	220	27.019	42.952	22.738	1.00	59.02	C
ATOM	9489	CZ	TYR	B	220	26.013	42.097	23.090	1.00	60.03	C
ATOM	9490	OH	TYR	B	220	26.387	40.915	23.694	1.00	65.94	O
ATOM	9492	CE2	TYR	B	220	24.689	42.438	22.840	1.00	57.10	C
ATOM	9494	CD2	TYR	B	220	24.396	43.658	22.216	1.00	55.80	C
ATOM	9496	C	TYR	B	220	23.817	47.430	19.628	1.00	61.17	C
ATOM	9497	O	TYR	B	220	22.944	48.103	20.158	1.00	64.67	O
ATOM	9498	N	ASN	B	221	24.569	47.880	18.628	1.00	59.63	N
ATOM	9500	CA	ASN	B	221	24.486	49.244	18.114	1.00	56.38	C
ATOM	9502	CB	ASN	B	221	25.865	49.780	18.037	1.00	53.93	C
ATOM	9505	CG	ASN	B	221	26.510	49.843	19.322	1.00	51.48	C
ATOM	9506	OD1	ASN	B	221	26.001	50.434	20.257	1.00	51.50	O
ATOM	9507	ND2	ASN	B	221	27.686	49.245	19.405	1.00	56.63	N
ATOM	9510	C	ASN	B	221	23.971	49.285	16.692	1.00	58.77	C
ATOM	9511	O	ASN	B	221	24.232	50.236	15.890	1.00	59.98	O
ATOM	9512	N	TYR	B	222	23.235	48.249	16.362	1.00	59.18	N
ATOM	9514	CA	TYR	B	222	22.870	48.096	14.998	1.00	60.10	C
ATOM	9516	CB	TYR	B	222	22.291	46.743	14.649	1.00	64.25	C
ATOM	9519	CG	TYR	B	222	21.579	46.790	13.336	1.00	65.11	C
ATOM	9520	CD1	TYR	B	222	22.008	47.632	12.328	1.00	67.45	C
ATOM	9522	CE1	TYR	B	222	21.356	47.679	11.135	1.00	68.44	C
ATOM	9524	CZ	TYR	B	222	20.261	46.875	10.941	1.00	68.04	C
ATOM	9525	OH	TYR	B	222	19.605	46.913	9.760	1.00	72.86	O
ATOM	9527	CE2	TYR	B	222	19.814	46.037	11.916	1.00	65.98	C
ATOM	9529	CD2	TYR	B	222	20.470	45.999	13.105	1.00	66.41	C
ATOM	9531	C	TYR	B	222	21.922	49.157	14.671	1.00	57.69	C
ATOM	9532	O	TYR	B	222	20.737	49.117	14.993	1.00	57.52	O
ATOM	9533	N	ASP	B	223	22.571	50.101	14.023	1.00	58.59	N
ATOM	9535	CA	ASP	B	223	22.058	51.250	13.316	1.00	57.20	C
ATOM	9537	CB	ASP	B	223	20.511	51.264	13.178	1.00	62.18	C

ATOM	9540	CG	ASP	B	223	19.929	52.514	12.350	1.00	65.70	C
ATOM	9541	OD1	ASP	B	223	19.045	53.192	12.919	1.00	72.63	O
ATOM	9542	OD2	ASP	B	223	20.243	52.884	11.172	1.00	60.60	O
ATOM	9543	C	ASP	B	223	22.694	52.313	14.142	1.00	52.54	C
ATOM	9544	O	ASP	B	223	23.514	53.049	13.659	1.00	53.53	O
ATOM	9545	N	LYS	B	224	22.364	52.357	15.416	1.00	55.48	N
ATOM	9547	CA	LYS	B	224	22.905	53.373	16.312	1.00	53.90	C
ATOM	9549	CB	LYS	B	224	22.306	54.743	16.002	1.00	55.04	C
ATOM	9552	CG	LYS	B	224	20.794	54.865	16.179	1.00	52.13	C
ATOM	9555	CD	LYS	B	224	20.386	56.306	15.817	1.00	47.46	C
ATOM	9558	CE	LYS	B	224	18.962	56.435	15.312	1.00	47.23	C
ATOM	9561	NZ	LYS	B	224	18.922	56.181	13.825	1.00	47.81	N
ATOM	9565	C	LYS	B	224	22.640	53.044	17.752	1.00	55.74	C
ATOM	9566	O	LYS	B	224	22.165	51.982	18.073	1.00	56.88	O
ATOM	9567	N	SER	B	225	22.974	53.966	18.632	1.00	59.75	N
ATOM	9569	CA	SER	B	225	22.735	53.775	20.046	1.00	58.65	C
ATOM	9571	CB	SER	B	225	23.820	52.902	20.666	1.00	58.31	C
ATOM	9574	OG	SER	B	225	23.410	51.542	20.653	1.00	64.32	O
ATOM	9576	C	SER	B	225	22.795	55.133	20.625	1.00	51.40	C
ATOM	9577	O	SER	B	225	23.838	55.743	20.585	1.00	52.21	O
ATOM	9578	N	ILE	B	226	21.681	55.609	21.159	1.00	48.97	N
ATOM	9580	CA	ILE	B	226	21.652	56.966	21.677	1.00	47.18	C
ATOM	9582	CB	ILE	B	226	20.782	57.870	20.775	1.00	42.41	C
ATOM	9584	CG1	ILE	B	226	19.421	57.276	20.563	1.00	36.20	C
ATOM	9587	CD1	ILE	B	226	18.355	58.275	20.220	1.00	36.28	C
ATOM	9591	CG2	ILE	B	226	21.425	58.015	19.433	1.00	45.19	C
ATOM	9595	C	ILE	B	226	21.191	57.023	23.126	1.00	45.97	C
ATOM	9596	O	ILE	B	226	20.610	56.051	23.598	1.00	43.09	O
ATOM	9597	N	VAL	B	227	21.491	58.152	23.797	1.00	43.58	N
ATOM	9599	CA	VAL	B	227	21.061	58.457	25.177	1.00	44.91	C
ATOM	9601	CB	VAL	B	227	22.211	59.070	26.001	1.00	40.77	C
ATOM	9603	CG1	VAL	B	227	21.726	59.493	27.313	1.00	40.80	C
ATOM	9607	CG2	VAL	B	227	23.360	58.096	26.187	1.00	38.82	C
ATOM	9611	C	VAL	B	227	19.926	59.511	25.104	1.00	48.95	C
ATOM	9612	O	VAL	B	227	20.150	60.617	24.596	1.00	50.25	O
ATOM	9613	N	ASP	B	228	18.730	59.205	25.624	1.00	44.84	N
ATOM	9615	CA	ASP	B	228	17.565	60.043	25.336	1.00	40.47	C
ATOM	9617	CB	ASP	B	228	16.936	59.514	24.036	1.00	38.92	C
ATOM	9620	CG	ASP	B	228	15.690	60.286	23.615	1.00	45.59	C
ATOM	9621	OD1	ASP	B	228	15.409	61.367	24.161	1.00	41.67	O
ATOM	9622	OD2	ASP	B	228	14.903	59.871	22.744	1.00	55.53	O
ATOM	9623	C	ASP	B	228	16.512	60.133	26.470	1.00	43.36	C
ATOM	9624	O	ASP	B	228	15.725	59.217	26.694	1.00	38.56	O
ATOM	9625	N	SER	B	229	16.488	61.267	27.164	1.00	47.36	N
ATOM	9627	CA	SER	B	229	15.612	61.464	28.310	1.00	47.52	C
ATOM	9629	CB	SER	B	229	16.147	62.621	29.118	1.00	47.91	C
ATOM	9632	OG	SER	B	229	16.818	63.473	28.231	1.00	51.18	O
ATOM	9634	C	SER	B	229	14.158	61.708	27.934	1.00	49.38	C
ATOM	9635	O	SER	B	229	13.330	61.994	28.798	1.00	54.96	O
ATOM	9636	N	GLY	B	230	13.854	61.632	26.644	1.00	48.92	N
ATOM	9638	CA	GLY	B	230	12.481	61.753	26.176	1.00	45.57	C
ATOM	9641	C	GLY	B	230	11.935	60.429	25.637	1.00	48.29	C
ATOM	9642	O	GLY	B	230	10.833	60.372	25.085	1.00	40.94	O
ATOM	9643	N	THR	B	231	12.735	59.372	25.785	1.00	45.26	N
ATOM	9645	CA	THR	B	231	12.303	58.035	25.516	1.00	43.47	C
ATOM	9647	CB	THR	B	231	13.349	57.260	24.743	1.00	44.17	C
ATOM	9649	OG1	THR	B	231	13.221	57.526	23.350	1.00	52.04	O

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ATOM   9651  CG2 THR B 231      13.075  55.769  24.829  1.00 43.12           C
ATOM   9655  C   THR B 231      12.171  57.381  26.865  1.00 43.15           C
ATOM   9656  O   THR B 231      13.088  57.379  27.628  1.00 49.59           O
ATOM   9657  N   THR B 232      11.031  56.804  27.149  1.00 45.08           N
ATOM   9659  CA  THR B 232      10.801  56.103  28.393  1.00 46.07           C
ATOM   9661  CB  THR B 232       9.344  55.581  28.375  1.00 43.69           C
ATOM   9663  OG1 THR B 232       8.475  56.653  27.964  1.00 49.53           O
ATOM   9665  CG2 THR B 232       8.867  55.276  29.748  1.00 43.76           C
ATOM   9669  C   THR B 232      11.759  54.905  28.630  1.00 49.16           C
ATOM   9670  O   THR B 232      12.563  54.922  29.567  1.00 51.59           O
ATOM   9671  N   ASN B 233      11.660  53.899  27.757  1.00 51.81           N
ATOM   9673  CA  ASN B 233      12.327  52.604  27.879  1.00 50.18           C
ATOM   9675  CB  ASN B 233      11.655  51.566  26.967  1.00 52.42           C
ATOM   9678  CG  ASN B 233      10.276  51.148  27.383  1.00 52.34           C
ATOM   9679  OD1 ASN B 233       9.680  51.677  28.321  1.00 50.82           O
ATOM   9680  ND2 ASN B 233       9.750  50.153  26.650  1.00 52.61           N
ATOM   9683  C   ASN B 233      13.729  52.350  27.416  1.00 47.14           C
ATOM   9684  O   ASN B 233      14.259  52.963  26.555  1.00 46.63           O
ATOM   9685  N   LEU B 234      14.306  51.355  28.019  1.00 47.70           N
ATOM   9687  CA  LEU B 234      15.430  50.768  27.402  1.00 51.03           C
ATOM   9689  CB  LEU B 234      15.903  49.591  28.256  1.00 47.48           C
ATOM   9692  CG  LEU B 234      17.388  49.421  28.108  1.00 44.91           C
ATOM   9694  CD1 LEU B 234      17.926  48.199  28.788  1.00 47.69           C
ATOM   9698  CD2 LEU B 234      17.643  49.365  26.676  1.00 49.15           C
ATOM   9702  C   LEU B 234      14.716  50.251  26.142  1.00 53.66           C
ATOM   9703  O   LEU B 234      13.639  49.694  26.270  1.00 57.67           O
ATOM   9704  N   ARG B 235      15.262  50.431  24.945  1.00 54.47           N
ATOM   9706  CA  ARG B 235      14.628  49.892  23.749  1.00 50.55           C
ATOM   9708  CB  ARG B 235      14.146  50.948  22.782  1.00 54.70           C
ATOM   9711  CG  ARG B 235      13.090  51.958  23.232  1.00 60.77           C
ATOM   9714  CD  ARG B 235      11.610  51.498  23.022  1.00 63.38           C
ATOM   9717  NE  ARG B 235      10.905  52.094  21.882  1.00 65.81           N
ATOM   9719  CZ  ARG B 235      10.487  51.422  20.806  1.00 68.02           C
ATOM   9720  NH1 ARG B 235       9.854  52.062  19.844  1.00 70.13           N
ATOM   9723  NH2 ARG B 235      10.703  50.121  20.678  1.00 68.31           N
ATOM   9726  C   ARG B 235      15.799  49.326  23.069  1.00 52.73           C
ATOM   9727  O   ARG B 235      16.794  50.033  22.960  1.00 51.89           O
ATOM   9728  N   LEU B 236      15.697  48.083  22.591  1.00 53.67           N
ATOM   9730  CA  LEU B 236      16.816  47.414  21.951  1.00 51.18           C
ATOM   9732  CB  LEU B 236      17.336  46.273  22.857  1.00 54.12           C
ATOM   9735  CG  LEU B 236      17.606  46.565  24.346  1.00 54.84           C
ATOM   9737  CD1 LEU B 236      17.445  45.294  25.170  1.00 59.47           C
ATOM   9741  CD2 LEU B 236      18.988  47.171  24.608  1.00 57.80           C
ATOM   9745  C   LEU B 236      16.472  46.882  20.555  1.00 49.66           C
ATOM   9746  O   LEU B 236      15.320  46.574  20.244  1.00 51.23           O
ATOM   9747  N   PRO B 237      17.516  46.802  19.740  1.00 49.55           N
ATOM   9748  CA  PRO B 237      17.528  46.266  18.364  1.00 53.89           C
ATOM   9750  CB  PRO B 237      19.037  46.236  18.036  1.00 52.34           C
ATOM   9753  CG  PRO B 237      19.634  47.291  18.888  1.00 51.34           C
ATOM   9756  CD  PRO B 237      18.837  47.302  20.146  1.00 49.53           C
ATOM   9759  C   PRO B 237      17.003  44.846  18.178  1.00 55.60           C
ATOM   9760  O   PRO B 237      17.524  43.944  18.794  1.00 51.46           O
ATOM   9761  N   LYS B 238      16.027  44.660  17.297  1.00 62.69           N
ATOM   9763  CA  LYS B 238      15.321  43.386  17.149  1.00 62.37           C
ATOM   9765  CB  LYS B 238      14.847  43.178  15.702  1.00 63.90           C
ATOM   9768  CG  LYS B 238      14.017  41.850  15.476  1.00 67.48           C
ATOM   9771  CD  LYS B 238      12.652  41.826  16.191  1.00 70.44           C
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ATOM	9774	CE	LYS	B	238	12.375	40.445	16.872	1.00	75.03	C
ATOM	9777	NZ	LYS	B	238	10.906	40.068	17.069	1.00	74.40	N
ATOM	9781	C	LYS	B	238	16.015	42.134	17.728	1.00	60.78	C
ATOM	9782	O	LYS	B	238	15.417	41.472	18.563	1.00	63.50	O
ATOM	9783	N	LYS	B	239	17.242	41.808	17.318	1.00	62.12	N
ATOM	9785	CA	LYS	B	239	17.976	40.613	17.832	1.00	62.88	C
ATOM	9787	CB	LYS	B	239	19.245	40.375	17.004	1.00	63.86	C
ATOM	9790	CG	LYS	B	239	19.081	39.310	15.932	1.00	71.17	C
ATOM	9793	CD	LYS	B	239	20.316	39.144	15.035	1.00	73.03	C
ATOM	9796	CE	LYS	B	239	20.418	37.713	14.440	1.00	74.08	C
ATOM	9799	NZ	LYS	B	239	20.797	37.688	12.972	1.00	69.81	N
ATOM	9803	C	LYS	B	239	18.422	40.587	19.317	1.00	63.28	C
ATOM	9804	O	LYS	B	239	18.587	39.508	19.896	1.00	62.95	O
ATOM	9805	N	VAL	B	240	18.627	41.760	19.915	1.00	58.01	N
ATOM	9807	CA	VAL	B	240	19.131	41.875	21.269	1.00	54.79	C
ATOM	9809	CB	VAL	B	240	19.827	43.225	21.427	1.00	58.03	C
ATOM	9811	CG1	VAL	B	240	20.256	43.484	22.875	1.00	57.45	C
ATOM	9815	CG2	VAL	B	240	21.047	43.292	20.450	1.00	57.36	C
ATOM	9819	C	VAL	B	240	17.964	41.707	22.220	1.00	56.00	C
ATOM	9820	O	VAL	B	240	17.980	40.890	23.143	1.00	52.22	O
ATOM	9821	N	PHE	B	241	16.928	42.488	22.012	1.00	55.23	N
ATOM	9823	CA	PHE	B	241	15.725	42.212	22.742	1.00	53.80	C
ATOM	9825	CB	PHE	B	241	14.545	42.796	22.032	1.00	51.30	C
ATOM	9828	CG	PHE	B	241	13.300	42.770	22.822	1.00	47.65	C
ATOM	9829	CD1	PHE	B	241	13.154	43.590	23.937	1.00	48.68	C
ATOM	9831	CE1	PHE	B	241	11.997	43.588	24.677	1.00	50.08	C
ATOM	9833	CZ	PHE	B	241	10.952	42.755	24.315	1.00	51.83	C
ATOM	9835	CE2	PHE	B	241	11.085	41.930	23.193	1.00	54.34	C
ATOM	9837	CD2	PHE	B	241	12.267	41.953	22.451	1.00	52.82	C
ATOM	9839	C	PHE	B	241	15.546	40.714	22.793	1.00	55.05	C
ATOM	9840	O	PHE	B	241	15.660	40.121	23.852	1.00	58.72	O
ATOM	9841	N	GLU	B	242	15.296	40.080	21.651	1.00	58.90	N
ATOM	9843	CA	GLU	B	242	14.915	38.650	21.665	1.00	61.77	C
ATOM	9845	CB	GLU	B	242	14.771	38.033	20.255	1.00	64.23	C
ATOM	9848	CG	GLU	B	242	13.434	38.214	19.518	1.00	66.72	C
ATOM	9851	CD	GLU	B	242	12.187	37.837	20.319	1.00	73.25	C
ATOM	9852	OE1	GLU	B	242	11.766	36.659	20.267	1.00	74.25	O
ATOM	9853	OE2	GLU	B	242	11.605	38.724	20.997	1.00	80.65	O
ATOM	9854	C	GLU	B	242	15.946	37.859	22.473	1.00	60.51	C
ATOM	9855	O	GLU	B	242	15.606	37.063	23.317	1.00	61.16	O
ATOM	9856	N	ALA	B	243	17.221	38.094	22.222	1.00	59.55	N
ATOM	9858	CA	ALA	B	243	18.246	37.412	22.981	1.00	54.76	C
ATOM	9860	CB	ALA	B	243	19.628	37.910	22.546	1.00	50.14	C
ATOM	9864	C	ALA	B	243	18.056	37.628	24.480	1.00	57.05	C
ATOM	9865	O	ALA	B	243	18.157	36.691	25.272	1.00	60.16	O
ATOM	9866	N	ALA	B	244	17.764	38.868	24.872	1.00	60.67	N
ATOM	9868	CA	ALA	B	244	17.847	39.252	26.277	1.00	56.99	C
ATOM	9870	CB	ALA	B	244	17.983	40.721	26.396	1.00	54.73	C
ATOM	9874	C	ALA	B	244	16.670	38.756	27.039	1.00	57.52	C
ATOM	9875	O	ALA	B	244	16.814	38.027	28.022	1.00	66.61	O
ATOM	9876	N	VAL	B	245	15.497	39.121	26.578	1.00	58.39	N
ATOM	9878	CA	VAL	B	245	14.264	38.628	27.182	1.00	57.61	C
ATOM	9880	CB	VAL	B	245	13.084	38.947	26.272	1.00	55.77	C
ATOM	9882	CG1	VAL	B	245	11.921	38.046	26.582	1.00	60.16	C
ATOM	9886	CG2	VAL	B	245	12.682	40.395	26.425	1.00	55.68	C
ATOM	9890	C	VAL	B	245	14.276	37.104	27.445	1.00	56.76	C
ATOM	9891	O	VAL	B	245	13.735	36.630	28.457	1.00	58.98	O

ATOM	9892	N	LYS	B	246	14.863	36.289	26.581	1.00 54.47	N
ATOM	9894	CA	LYS	B	246	14.782	34.895	26.954	1.00 59.19	C
ATOM	9896	CB	LYS	B	246	15.091	33.852	25.848	1.00 58.81	C
ATOM	9899	CG	LYS	B	246	16.412	33.840	25.110	1.00 66.67	C
ATOM	9902	CD	LYS	B	246	16.771	32.349	24.732	1.00 73.69	C
ATOM	9905	CE	LYS	B	246	17.214	32.133	23.273	1.00 77.68	C
ATOM	9908	NZ	LYS	B	246	17.712	30.722	23.053	1.00 78.54	N
ATOM	9912	C	LYS	B	246	15.610	34.750	28.221	1.00 60.14	C
ATOM	9913	O	LYS	B	246	15.229	34.049	29.153	1.00 59.34	O
ATOM	9914	N	SER	B	247	16.715	35.484	28.265	1.00 59.55	N
ATOM	9916	CA	SER	B	247	17.663	35.354	29.355	1.00 58.72	C
ATOM	9918	CB	SER	B	247	18.952	36.101	29.017	1.00 57.44	C
ATOM	9921	OG	SER	B	247	20.044	35.581	29.739	1.00 59.12	O
ATOM	9923	C	SER	B	247	17.082	35.830	30.676	1.00 58.15	C
ATOM	9924	O	SER	B	247	17.282	35.207	31.709	1.00 61.22	O
ATOM	9925	N	ILE	B	248	16.339	36.915	30.632	1.00 55.00	N
ATOM	9927	CA	ILE	B	248	15.793	37.501	31.837	1.00 53.84	C
ATOM	9929	CB	ILE	B	248	15.123	38.845	31.474	1.00 53.06	C
ATOM	9931	CG1	ILE	B	248	16.196	39.788	30.939	1.00 51.58	C
ATOM	9934	CD1	ILE	B	248	15.656	41.103	30.457	1.00 55.81	C
ATOM	9938	CG2	ILE	B	248	14.381	39.461	32.661	1.00 52.52	C
ATOM	9942	C	ILE	B	248	14.821	36.536	32.460	1.00 54.27	C
ATOM	9943	O	ILE	B	248	14.720	36.477	33.668	1.00 51.87	O
ATOM	9944	N	LYS	B	249	14.114	35.784	31.619	1.00 58.95	N
ATOM	9946	CA	LYS	B	249	13.080	34.863	32.076	1.00 63.35	C
ATOM	9948	CB	LYS	B	249	12.386	34.163	30.895	1.00 67.38	C
ATOM	9951	CG	LYS	B	249	11.566	35.076	29.969	1.00 71.83	C
ATOM	9954	CD	LYS	B	249	10.893	34.193	28.921	1.00 72.34	C
ATOM	9957	CE	LYS	B	249	10.025	34.974	27.965	1.00 74.28	C
ATOM	9960	NZ	LYS	B	249	10.188	34.448	26.585	1.00 75.13	N
ATOM	9964	C	LYS	B	249	13.828	33.829	32.836	1.00 64.05	C
ATOM	9965	O	LYS	B	249	13.596	33.579	34.028	1.00 66.66	O
ATOM	9966	N	ALA	B	250	14.755	33.235	32.098	1.00 60.44	N
ATOM	9968	CA	ALA	B	250	15.572	32.211	32.626	1.00 52.39	C
ATOM	9970	CB	ALA	B	250	16.787	32.061	31.812	1.00 47.35	C
ATOM	9974	C	ALA	B	250	15.897	32.687	33.993	1.00 53.08	C
ATOM	9975	O	ALA	B	250	15.492	32.096	34.986	1.00 60.98	O
ATOM	9976	N	ALA	B	251	16.602	33.792	34.071	1.00 55.04	N
ATOM	9978	CA	ALA	B	251	17.098	34.209	35.367	1.00 52.66	C
ATOM	9980	CB	ALA	B	251	17.817	35.549	35.273	1.00 50.20	C
ATOM	9984	C	ALA	B	251	15.943	34.276	36.333	1.00 52.91	C
ATOM	9985	O	ALA	B	251	16.084	33.908	37.476	1.00 63.90	O
ATOM	9986	N	SER	B	252	14.786	34.706	35.865	1.00 51.39	N
ATOM	9988	CA	SER	B	252	13.655	34.931	36.738	1.00 47.50	C
ATOM	9990	CB	SER	B	252	12.838	36.112	36.195	1.00 45.09	C
ATOM	9993	OG	SER	B	252	12.937	36.176	34.777	1.00 44.57	O
ATOM	9995	C	SER	B	252	12.744	33.741	36.858	1.00 46.38	C
ATOM	9996	O	SER	B	252	11.696	33.817	37.506	1.00 52.86	O
ATOM	9997	N	SER	B	253	13.095	32.626	36.257	1.00 46.89	N
ATOM	9999	CA	SER	B	253	12.113	31.515	36.239	1.00 51.70	C
ATOM	10001	CB	SER	B	253	12.694	30.258	35.673	1.00 49.29	C
ATOM	10004	OG	SER	B	253	12.622	29.350	36.744	1.00 50.36	O
ATOM	10006	C	SER	B	253	11.493	31.064	37.584	1.00 50.23	C
ATOM	10007	O	SER	B	253	10.549	30.335	37.570	1.00 48.06	O
ATOM	10008	N	THR	B	254	11.992	31.448	38.743	1.00 54.64	N
ATOM	10010	CA	THR	B	254	11.303	30.979	39.944	1.00 55.86	C
ATOM	10012	CB	THR	B	254	11.876	31.518	41.285	1.00 55.22	C

ATOM	10014	OG1	THR	B	254	12.383	32.851	41.131	1.00	59.23	O
ATOM	10016	CG2	THR	B	254	13.081	30.702	41.690	1.00	57.98	C
ATOM	10020	C	THR	B	254	9.853	31.304	39.850	1.00	56.31	C
ATOM	10021	O	THR	B	254	9.067	30.740	40.587	1.00	58.63	O
ATOM	10022	N	GLU	B	255	9.496	32.222	38.954	1.00	63.22	N
ATOM	10024	CA	GLU	B	255	8.081	32.520	38.661	1.00	64.71	C
ATOM	10026	CB	GLU	B	255	7.691	33.884	39.210	1.00	64.18	C
ATOM	10029	CG	GLU	B	255	7.814	33.921	40.721	1.00	65.62	C
ATOM	10032	CD	GLU	B	255	6.988	35.013	41.364	1.00	65.81	C
ATOM	10033	OE1	GLU	B	255	5.941	35.412	40.801	1.00	65.88	O
ATOM	10034	OE2	GLU	B	255	7.398	35.458	42.452	1.00	67.44	O
ATOM	10035	C	GLU	B	255	7.843	32.474	37.155	1.00	65.92	C
ATOM	10036	O	GLU	B	255	8.761	32.231	36.374	1.00	67.96	O
ATOM	10037	N	LYS	B	256	6.611	32.686	36.737	1.00	64.15	N
ATOM	10039	CA	LYS	B	256	6.347	32.771	35.319	1.00	62.25	C
ATOM	10041	CB	LYS	B	256	5.753	31.487	34.780	1.00	65.89	C
ATOM	10044	CG	LYS	B	256	6.795	30.358	34.631	1.00	70.21	C
ATOM	10047	CD	LYS	B	256	7.580	30.472	33.304	1.00	71.31	C
ATOM	10050	CE	LYS	B	256	8.688	29.418	33.197	1.00	70.80	C
ATOM	10053	NZ	LYS	B	256	9.037	28.832	34.535	1.00	71.41	N
ATOM	10057	C	LYS	B	256	5.414	33.918	35.091	1.00	61.03	C
ATOM	10058	O	LYS	B	256	4.620	34.277	35.977	1.00	57.24	O
ATOM	10059	N	PHE	B	257	5.522	34.500	33.903	1.00	57.37	N
ATOM	10061	CA	PHE	B	257	4.700	35.632	33.563	1.00	58.14	C
ATOM	10063	CB	PHE	B	257	5.557	36.904	33.635	1.00	57.69	C
ATOM	10066	CG	PHE	B	257	6.262	37.095	34.971	1.00	52.26	C
ATOM	10067	CD1	PHE	B	257	7.620	36.875	35.098	1.00	55.74	C
ATOM	10069	CE1	PHE	B	257	8.248	37.044	36.298	1.00	55.86	C
ATOM	10071	CZ	PHE	B	257	7.530	37.444	37.391	1.00	56.14	C
ATOM	10073	CE2	PHE	B	257	6.194	37.666	37.274	1.00	54.82	C
ATOM	10075	CD2	PHE	B	257	5.569	37.490	36.073	1.00	49.91	C
ATOM	10077	C	PHE	B	257	4.089	35.397	32.177	1.00	61.13	C
ATOM	10078	O	PHE	B	257	4.687	34.705	31.356	1.00	60.35	O
ATOM	10079	N	PRO	B	258	2.902	35.964	31.934	1.00	64.44	N
ATOM	10080	CA	PRO	B	258	2.175	35.834	30.651	1.00	67.15	C
ATOM	10082	CB	PRO	B	258	0.765	36.286	31.018	1.00	65.96	C
ATOM	10085	CG	PRO	B	258	0.946	37.246	32.161	1.00	63.58	C
ATOM	10088	CD	PRO	B	258	2.172	36.804	32.906	1.00	63.13	C
ATOM	10091	C	PRO	B	258	2.740	36.758	29.561	1.00	71.79	C
ATOM	10092	O	PRO	B	258	2.885	37.952	29.830	1.00	76.81	O
ATOM	10093	N	ASP	B	259	3.010	36.250	28.357	1.00	73.38	N
ATOM	10095	CA	ASP	B	259	3.820	36.980	27.356	1.00	75.86	C
ATOM	10097	CB	ASP	B	259	3.890	36.221	26.029	1.00	77.62	C
ATOM	10100	CG	ASP	B	259	3.803	34.701	26.222	1.00	78.97	C
ATOM	10101	OD1	ASP	B	259	4.731	33.953	25.816	1.00	64.34	O
ATOM	10102	OD2	ASP	B	259	2.814	34.178	26.786	1.00	80.20	O
ATOM	10103	C	ASP	B	259	3.443	38.429	27.102	1.00	76.48	C
ATOM	10104	O	ASP	B	259	4.216	39.183	26.500	1.00	74.95	O
ATOM	10105	N	GLY	B	260	2.259	38.822	27.548	1.00	75.19	N
ATOM	10107	CA	GLY	B	260	1.905	40.221	27.489	1.00	72.78	C
ATOM	10110	C	GLY	B	260	2.926	40.966	28.316	1.00	68.86	C
ATOM	10111	O	GLY	B	260	3.429	41.998	27.885	1.00	70.54	O
ATOM	10112	N	PHE	B	261	3.239	40.425	29.495	1.00	65.94	N
ATOM	10114	CA	PHE	B	261	4.187	41.062	30.408	1.00	61.43	C
ATOM	10116	CB	PHE	B	261	4.317	40.311	31.709	1.00	56.82	C
ATOM	10119	CG	PHE	B	261	5.391	40.871	32.570	1.00	54.73	C
ATOM	10120	CD1	PHE	B	261	5.126	41.944	33.382	1.00	51.57	C

ATOM	10122	CE1	PHE	B	261	6.106	42.488	34.188	1.00	51.52	C
ATOM	10124	CZ	PHE	B	261	7.365	41.961	34.166	1.00	57.72	C
ATOM	10126	CE2	PHE	B	261	7.658	40.876	33.345	1.00	57.74	C
ATOM	10128	CD2	PHE	B	261	6.676	40.343	32.550	1.00	59.54	C
ATOM	10130	C	PHE	B	261	5.603	41.195	29.876	1.00	57.86	C
ATOM	10131	O	PHE	B	261	6.386	41.981	30.377	1.00	68.09	O
ATOM	10132	N	TRP	B	262	5.954	40.389	28.892	1.00	56.00	N
ATOM	10134	CA	TRP	B	262	7.253	40.518	28.263	1.00	56.28	C
ATOM	10136	CB	TRP	B	262	7.932	39.170	28.049	1.00	54.41	C
ATOM	10139	CG	TRP	B	262	8.136	38.278	29.238	1.00	55.03	C
ATOM	10140	CD1	TRP	B	262	7.407	37.184	29.525	1.00	52.81	C
ATOM	10142	NE1	TRP	B	262	7.866	36.578	30.669	1.00	58.02	N
ATOM	10144	CE2	TRP	B	262	8.931	37.281	31.156	1.00	56.77	C
ATOM	10145	CD2	TRP	B	262	9.135	38.379	30.276	1.00	63.26	C
ATOM	10146	CE3	TRP	B	262	10.180	39.274	30.552	1.00	54.90	C
ATOM	10148	CZ3	TRP	B	262	10.970	39.046	31.685	1.00	55.79	C
ATOM	10150	CH2	TRP	B	262	10.733	37.955	32.537	1.00	54.57	C
ATOM	10152	CZ2	TRP	B	262	9.717	37.063	32.288	1.00	53.00	C
ATOM	10154	C	TRP	B	262	7.104	41.282	26.932	1.00	55.99	C
ATOM	10155	O	TRP	B	262	8.062	41.510	26.231	1.00	59.38	O
ATOM	10156	N	LEU	B	263	5.907	41.686	26.565	1.00	57.34	N
ATOM	10158	CA	LEU	B	263	5.811	42.625	25.461	1.00	55.32	C
ATOM	10160	CB	LEU	B	263	4.939	42.116	24.311	1.00	55.06	C
ATOM	10163	CG	LEU	B	263	5.272	40.716	23.756	1.00	50.87	C
ATOM	10165	CD1	LEU	B	263	4.008	40.071	23.221	1.00	53.49	C
ATOM	10169	CD2	LEU	B	263	6.315	40.711	22.680	1.00	50.09	C
ATOM	10173	C	LEU	B	263	5.282	43.907	26.099	1.00	57.11	C
ATOM	10174	O	LEU	B	263	4.669	44.749	25.449	1.00	62.05	O
ATOM	10175	N	GLY	B	264	5.520	44.039	27.400	1.00	58.91	N
ATOM	10177	CA	GLY	B	264	5.227	45.268	28.129	1.00	59.68	C
ATOM	10180	C	GLY	B	264	3.855	45.865	27.896	1.00	59.63	C
ATOM	10181	O	GLY	B	264	3.643	47.054	28.142	1.00	64.20	O
ATOM	10182	N	GLU	B	265	2.918	45.042	27.441	1.00	60.98	N
ATOM	10184	CA	GLU	B	265	1.547	45.480	27.189	1.00	64.98	C
ATOM	10186	CB	GLU	B	265	0.878	44.484	26.249	1.00	66.91	C
ATOM	10189	CG	GLU	B	265	0.967	44.902	24.795	1.00	74.60	C
ATOM	10192	CD	GLU	B	265	0.904	43.720	23.835	1.00	81.19	C
ATOM	10193	OE1	GLU	B	265	1.023	43.968	22.603	1.00	80.62	O
ATOM	10194	OE2	GLU	B	265	0.734	42.556	24.311	1.00	85.40	O
ATOM	10195	C	GLU	B	265	0.674	45.595	28.433	1.00	66.06	C
ATOM	10196	O	GLU	B	265	-0.178	46.471	28.534	1.00	67.79	O
ATOM	10197	N	GLN	B	266	0.890	44.677	29.368	1.00	65.41	N
ATOM	10199	CA	GLN	B	266	0.029	44.521	30.539	1.00	66.17	C
ATOM	10201	CB	GLN	B	266	-0.860	43.299	30.402	1.00	66.49	C
ATOM	10204	CG	GLN	B	266	-0.090	42.024	30.448	1.00	66.76	C
ATOM	10207	CD	GLN	B	266	-0.932	40.851	30.044	1.00	71.05	C
ATOM	10208	OE1	GLN	B	266	-0.926	40.453	28.881	1.00	78.94	O
ATOM	10209	NE2	GLN	B	266	-1.660	40.282	30.996	1.00	65.67	N
ATOM	10212	C	GLN	B	266	0.880	44.359	31.773	1.00	66.63	C
ATOM	10213	O	GLN	B	266	1.998	43.881	31.714	1.00	61.37	O
ATOM	10214	N	LEU	B	267	0.335	44.745	32.910	1.00	68.01	N
ATOM	10216	CA	LEU	B	267	1.196	44.910	34.055	1.00	66.65	C
ATOM	10218	CB	LEU	B	267	0.782	46.202	34.780	1.00	64.75	C
ATOM	10221	CG	LEU	B	267	-0.664	46.456	35.117	1.00	61.97	C
ATOM	10223	CD1	LEU	B	267	-0.953	45.596	36.275	1.00	65.54	C
ATOM	10227	CD2	LEU	B	267	-0.883	47.886	35.487	1.00	62.67	C
ATOM	10231	C	LEU	B	267	1.305	43.674	34.947	1.00	66.02	C

ATOM	10232	O	LEU	B	267	0.742	42.633	34.643	1.00	65.04	O
ATOM	10233	N	VAL	B	268	2.062	43.779	36.031	1.00	66.18	N
ATOM	10235	CA	VAL	B	268	2.201	42.665	36.966	1.00	63.11	C
ATOM	10237	CB	VAL	B	268	3.526	42.035	36.844	1.00	63.47	C
ATOM	10239	CG1	VAL	B	268	3.584	40.817	37.674	1.00	65.01	C
ATOM	10243	CG2	VAL	B	268	3.741	41.689	35.434	1.00	67.71	C
ATOM	10247	C	VAL	B	268	2.089	43.146	38.376	1.00	62.57	C
ATOM	10248	O	VAL	B	268	2.535	44.227	38.723	1.00	64.30	O
ATOM	10249	N	CYS	B	269	1.498	42.320	39.204	1.00	62.51	N
ATOM	10251	CA	CYS	B	269	1.189	42.742	40.543	1.00	62.84	C
ATOM	10253	CB	CYS	B	269	-0.334	42.937	40.667	1.00	64.89	C
ATOM	10256	SG	CYS	B	269	-0.978	44.253	39.612	1.00	68.14	S
ATOM	10257	C	CYS	B	269	1.677	41.778	41.610	1.00	58.60	C
ATOM	10258	O	CYS	B	269	1.707	40.556	41.420	1.00	57.72	O
ATOM	10259	N	TRP	B	270	2.040	42.374	42.731	1.00	50.46	N
ATOM	10261	CA	TRP	B	270	2.483	41.669	43.896	1.00	53.90	C
ATOM	10263	CB	TRP	B	270	3.996	41.833	44.087	1.00	54.89	C
ATOM	10266	CG	TRP	B	270	4.740	40.871	43.267	1.00	55.99	C
ATOM	10267	CD1	TRP	B	270	4.829	39.543	43.480	1.00	57.11	C
ATOM	10269	NE1	TRP	B	270	5.601	38.961	42.503	1.00	61.98	N
ATOM	10271	CE2	TRP	B	270	6.026	39.929	41.633	1.00	61.92	C
ATOM	10272	CD2	TRP	B	270	5.500	41.145	42.081	1.00	57.92	C
ATOM	10273	CE3	TRP	B	270	5.793	42.297	41.355	1.00	53.37	C
ATOM	10275	CZ3	TRP	B	270	6.571	42.199	40.241	1.00	53.54	C
ATOM	10277	CH2	TRP	B	270	7.083	40.982	39.812	1.00	56.68	C
ATOM	10279	CZ2	TRP	B	270	6.825	39.834	40.490	1.00	64.93	C
ATOM	10281	C	TRP	B	270	1.753	42.293	45.048	1.00	52.99	C
ATOM	10282	O	TRP	B	270	1.321	43.432	44.976	1.00	52.30	O
ATOM	10283	N	GLN	B	271	1.612	41.554	46.126	1.00	56.53	N
ATOM	10285	CA	GLN	B	271	0.897	42.083	47.267	1.00	58.01	C
ATOM	10287	CB	GLN	B	271	0.936	41.079	48.415	1.00	60.04	C
ATOM	10290	CG	GLN	B	271	0.773	41.648	49.826	1.00	69.55	C
ATOM	10293	CD	GLN	B	271	1.280	40.664	50.910	1.00	75.84	C
ATOM	10294	OE1	GLN	B	271	2.450	40.268	50.900	1.00	78.40	O
ATOM	10295	NE2	GLN	B	271	0.392	40.262	51.825	1.00	80.06	N
ATOM	10298	C	GLN	B	271	1.683	43.308	47.553	1.00	54.15	C
ATOM	10299	O	GLN	B	271	2.781	43.454	47.050	1.00	62.98	O
ATOM	10300	N	ALA	B	272	1.162	44.209	48.341	1.00	54.28	N
ATOM	10302	CA	ALA	B	272	1.964	45.351	48.683	1.00	55.76	C
ATOM	10304	CB	ALA	B	272	1.280	46.192	49.767	1.00	54.56	C
ATOM	10308	C	ALA	B	272	3.325	44.876	49.169	1.00	57.86	C
ATOM	10309	O	ALA	B	272	3.497	43.739	49.579	1.00	57.62	O
ATOM	10310	N	GLY	B	273	4.296	45.776	49.067	1.00	64.15	N
ATOM	10312	CA	GLY	B	273	5.605	45.660	49.699	1.00	62.02	C
ATOM	10315	C	GLY	B	273	6.435	44.431	49.502	1.00	59.47	C
ATOM	10316	O	GLY	B	273	7.544	44.376	50.003	1.00	62.91	O
ATOM	10317	N	THR	B	274	5.926	43.467	48.751	1.00	59.03	N
ATOM	10319	CA	THR	B	274	6.529	42.155	48.713	1.00	52.35	C
ATOM	10321	CB	THR	B	274	5.483	41.091	49.087	1.00	58.59	C
ATOM	10323	OG1	THR	B	274	4.574	40.872	47.988	1.00	54.95	O
ATOM	10325	CG2	THR	B	274	4.593	41.579	50.243	1.00	55.11	C
ATOM	10329	C	THR	B	274	6.971	41.857	47.351	1.00	46.12	C
ATOM	10330	O	THR	B	274	6.961	40.726	46.957	1.00	46.68	O
ATOM	10331	N	THR	B	275	7.332	42.868	46.600	1.00	47.81	N
ATOM	10333	CA	THR	B	275	7.866	42.606	45.291	1.00	48.64	C
ATOM	10335	CB	THR	B	275	8.257	43.907	44.540	1.00	47.68	C
ATOM	10337	OG1	THR	B	275	7.090	44.596	44.064	1.00	50.08	O

ATOM	10339	CG2	THR	B	275	9.005	43.551	43.276	1.00	46.87	C
ATOM	10343	C	THR	B	275	9.114	41.783	45.539	1.00	51.15	C
ATOM	10344	O	THR	B	275	9.984	42.143	46.371	1.00	54.79	O
ATOM	10345	N	PRO	B	276	9.190	40.685	44.822	1.00	46.67	N
ATOM	10346	CA	PRO	B	276	10.355	39.808	44.811	1.00	48.43	C
ATOM	10348	CB	PRO	B	276	9.895	38.611	43.955	1.00	50.23	C
ATOM	10351	CG	PRO	B	276	8.574	38.955	43.383	1.00	51.47	C
ATOM	10354	CD	PRO	B	276	8.101	40.227	43.956	1.00	50.10	C
ATOM	10357	C	PRO	B	276	11.557	40.420	44.091	1.00	48.73	C
ATOM	10358	O	PRO	B	276	12.010	39.796	43.088	1.00	44.55	O
ATOM	10359	N	TRP	B	277	12.083	41.567	44.537	1.00	48.39	N
ATOM	10361	CA	TRP	B	277	13.120	42.230	43.711	1.00	48.55	C
ATOM	10363	CB	TRP	B	277	13.740	43.469	44.393	1.00	48.09	C
ATOM	10366	CG	TRP	B	277	12.769	44.677	44.518	1.00	50.79	C
ATOM	10367	CD1	TRP	B	277	12.309	45.236	45.680	1.00	54.20	C
ATOM	10369	NE1	TRP	B	277	11.463	46.285	45.412	1.00	46.92	N
ATOM	10371	CE2	TRP	B	277	11.359	46.429	44.063	1.00	42.74	C
ATOM	10372	CD2	TRP	B	277	12.164	45.439	43.466	1.00	47.17	C
ATOM	10373	CE3	TRP	B	277	12.222	45.390	42.078	1.00	51.68	C
ATOM	10375	CZ3	TRP	B	277	11.486	46.318	41.352	1.00	46.11	C
ATOM	10377	CH2	TRP	B	277	10.703	47.270	41.991	1.00	45.63	C
ATOM	10379	CZ2	TRP	B	277	10.626	47.338	43.337	1.00	42.71	C
ATOM	10381	C	TRP	B	277	14.202	41.229	43.271	1.00	45.71	C
ATOM	10382	O	TRP	B	277	14.664	41.180	42.123	1.00	48.22	O
ATOM	10383	N	ASN	B	278	14.594	40.388	44.184	1.00	50.19	N
ATOM	10385	CA	ASN	B	278	15.742	39.549	43.918	1.00	48.45	C
ATOM	10387	CB	ASN	B	278	16.264	39.003	45.227	1.00	53.84	C
ATOM	10390	CG	ASN	B	278	15.300	38.046	45.876	1.00	53.98	C
ATOM	10391	OD1	ASN	B	278	15.630	36.887	46.122	1.00	58.86	O
ATOM	10392	ND2	ASN	B	278	14.095	38.528	46.162	1.00	58.00	N
ATOM	10395	C	ASN	B	278	15.579	38.410	42.941	1.00	47.96	C
ATOM	10396	O	ASN	B	278	16.577	37.810	42.616	1.00	48.00	O
ATOM	10397	N	ILE	B	279	14.384	38.074	42.447	1.00	48.44	N
ATOM	10399	CA	ILE	B	279	14.356	36.960	41.496	1.00	44.44	C
ATOM	10401	CB	ILE	B	279	13.006	36.227	41.370	1.00	48.45	C
ATOM	10403	CG1	ILE	B	279	11.844	37.181	41.143	1.00	53.39	C
ATOM	10406	CD1	ILE	B	279	10.671	36.467	40.444	1.00	49.91	C
ATOM	10410	CG2	ILE	B	279	12.724	35.335	42.562	1.00	44.38	C
ATOM	10414	C	ILE	B	279	14.796	37.386	40.131	1.00	47.23	C
ATOM	10415	O	ILE	B	279	15.121	36.515	39.311	1.00	48.85	O
ATOM	10416	N	PHE	B	280	14.809	38.714	39.886	1.00	51.85	N
ATOM	10418	CA	PHE	B	280	15.181	39.313	38.572	1.00	43.99	C
ATOM	10420	CB	PHE	B	280	14.346	40.540	38.196	1.00	47.60	C
ATOM	10423	CG	PHE	B	280	12.840	40.323	38.213	1.00	50.69	C
ATOM	10424	CD1	PHE	B	280	12.157	40.062	37.040	1.00	47.59	C
ATOM	10426	CE1	PHE	B	280	10.793	39.871	37.045	1.00	49.69	C
ATOM	10428	CZ	PHE	B	280	10.114	39.944	38.220	1.00	53.43	C
ATOM	10430	CE2	PHE	B	280	10.792	40.216	39.402	1.00	50.88	C
ATOM	10432	CD2	PHE	B	280	12.126	40.407	39.395	1.00	44.76	C
ATOM	10434	C	PHE	B	280	16.604	39.788	38.614	1.00	43.94	C
ATOM	10435	O	PHE	B	280	17.114	40.282	39.655	1.00	43.28	O
ATOM	10436	N	PRO	B	281	17.256	39.685	37.473	1.00	37.73	N
ATOM	10437	CA	PRO	B	281	18.668	39.942	37.413	1.00	33.44	C
ATOM	10439	CB	PRO	B	281	19.089	39.028	36.294	1.00	36.50	C
ATOM	10442	CG	PRO	B	281	18.034	39.215	35.300	1.00	38.20	C
ATOM	10445	CD	PRO	B	281	16.737	39.358	36.132	1.00	39.79	C
ATOM	10448	C	PRO	B	281	18.928	41.346	37.036	1.00	36.85	C

ATOM	10449	O	PRO	B	281	18.039	41.984	36.537	1.00	43.97	O
ATOM	10450	N	VAL	B	282	20.144	41.806	37.290	1.00	42.26	N
ATOM	10452	CA	VAL	B	282	20.585	43.141	36.983	1.00	39.23	C
ATOM	10454	CB	VAL	B	282	21.818	43.477	37.809	1.00	43.53	C
ATOM	10456	CG1	VAL	B	282	21.497	43.457	39.275	1.00	40.33	C
ATOM	10460	CG2	VAL	B	282	22.988	42.465	37.444	1.00	39.80	C
ATOM	10464	C	VAL	B	282	21.100	43.067	35.569	1.00	41.69	C
ATOM	10465	O	VAL	B	282	21.582	42.011	35.184	1.00	35.21	O
ATOM	10466	N	ILE	B	283	21.025	44.169	34.819	1.00	39.90	N
ATOM	10468	CA	ILE	B	283	21.558	44.219	33.457	1.00	39.37	C
ATOM	10470	CB	ILE	B	283	20.505	44.748	32.505	1.00	40.29	C
ATOM	10472	CG1	ILE	B	283	19.273	43.855	32.531	1.00	35.95	C
ATOM	10475	CD1	ILE	B	283	18.066	44.572	32.090	1.00	41.11	C
ATOM	10479	CG2	ILE	B	283	21.074	44.867	31.102	1.00	33.71	C
ATOM	10483	C	ILE	B	283	22.709	45.198	33.425	1.00	46.04	C
ATOM	10484	O	ILE	B	283	22.691	46.233	34.110	1.00	49.32	O
ATOM	10485	N	SER	B	284	23.709	44.885	32.612	1.00	48.26	N
ATOM	10487	CA	SER	B	284	24.893	45.713	32.522	1.00	46.53	C
ATOM	10489	CB	SER	B	284	26.088	44.939	33.112	1.00	44.99	C
ATOM	10492	OG	SER	B	284	25.927	44.696	34.522	1.00	44.94	O
ATOM	10494	C	SER	B	284	25.206	46.048	31.086	1.00	46.23	C
ATOM	10495	O	SER	B	284	25.284	45.130	30.269	1.00	51.09	O
ATOM	10496	N	LEU	B	285	25.388	47.325	30.764	1.00	41.48	N
ATOM	10498	CA	LEU	B	285	25.877	47.669	29.447	1.00	39.92	C
ATOM	10500	CB	LEU	B	285	24.939	48.679	28.756	1.00	35.47	C
ATOM	10503	CG	LEU	B	285	23.394	48.570	28.921	1.00	38.05	C
ATOM	10505	CD1	LEU	B	285	22.708	49.787	28.300	1.00	35.50	C
ATOM	10509	CD2	LEU	B	285	22.717	47.308	28.356	1.00	37.92	C
ATOM	10513	C	LEU	B	285	27.330	48.156	29.671	1.00	39.56	C
ATOM	10514	O	LEU	B	285	27.562	48.901	30.617	1.00	37.44	O
ATOM	10515	N	TYR	B	286	28.288	47.684	28.850	1.00	39.99	N
ATOM	10517	CA	TYR	B	286	29.697	48.167	28.835	1.00	45.00	C
ATOM	10519	CB	TYR	B	286	30.698	47.012	28.685	1.00	46.18	C
ATOM	10522	CG	TYR	B	286	30.744	45.888	29.752	1.00	48.12	C
ATOM	10523	CD1	TYR	B	286	29.678	45.025	29.975	1.00	47.49	C
ATOM	10525	CE1	TYR	B	286	29.767	44.036	30.934	1.00	46.99	C
ATOM	10527	CZ	TYR	B	286	30.945	43.911	31.667	1.00	49.87	C
ATOM	10528	OH	TYR	B	286	31.134	42.952	32.643	1.00	45.54	O
ATOM	10530	CE2	TYR	B	286	31.986	44.753	31.444	1.00	45.24	C
ATOM	10532	CD2	TYR	B	286	31.892	45.699	30.511	1.00	38.43	C
ATOM	10534	C	TYR	B	286	29.917	49.065	27.602	1.00	46.95	C
ATOM	10535	O	TYR	B	286	29.613	48.633	26.494	1.00	43.90	O
ATOM	10536	N	LEU	B	287	30.480	50.269	27.782	1.00	42.38	N
ATOM	10538	CA	LEU	B	287	30.526	51.257	26.741	1.00	40.41	C
ATOM	10540	CB	LEU	B	287	29.874	52.562	27.203	1.00	39.65	C
ATOM	10543	CG	LEU	B	287	28.487	52.664	27.896	1.00	35.23	C
ATOM	10545	CD1	LEU	B	287	28.344	53.994	28.625	1.00	37.04	C
ATOM	10549	CD2	LEU	B	287	27.480	52.558	26.938	1.00	26.22	C
ATOM	10553	C	LEU	B	287	31.960	51.571	26.564	1.00	45.87	C
ATOM	10554	O	LEU	B	287	32.716	51.400	27.474	1.00	51.50	O
ATOM	10555	N	MET	B	288	32.356	52.041	25.401	1.00	50.25	N
ATOM	10557	CA	MET	B	288	33.749	52.315	25.123	1.00	52.89	C
ATOM	10559	CB	MET	B	288	33.884	52.619	23.654	1.00	57.49	C
ATOM	10562	CG	MET	B	288	35.255	52.585	23.075	1.00	59.46	C
ATOM	10565	SD	MET	B	288	35.108	53.029	21.308	1.00	62.39	S
ATOM	10566	CE	MET	B	288	35.316	51.616	20.631	1.00	56.14	C
ATOM	10570	C	MET	B	288	34.157	53.518	25.927	1.00	55.91	C

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ATOM  10571  O   MET B 288      33.354  54.433  26.109  1.00 57.24           O
ATOM  10572  N   GLY B 289      35.403  53.522  26.405  1.00 56.64           N
ATOM  10574  CA  GLY B 289      35.911  54.608  27.230  1.00 55.82           C
ATOM  10577  C   GLY B 289      36.880  55.482  26.473  1.00 58.37           C
ATOM  10578  O   GLY B 289      37.113  55.267  25.286  1.00 59.88           O
ATOM  10579  N   GLU B 290      37.460  56.465  27.143  1.00 57.96           N
ATOM  10581  CA  GLU B 290      38.341  57.390  26.444  1.00 59.77           C
ATOM  10583  CB  GLU B 290      38.373  58.726  27.150  1.00 59.36           C
ATOM  10586  CG  GLU B 290      37.021  59.394  27.100  1.00 60.99           C
ATOM  10589  CD  GLU B 290      37.125  60.824  26.612  1.00 63.85           C
ATOM  10590  OE1 GLU B 290      37.333  61.687  27.500  1.00 67.58           O
ATOM  10591  OE2 GLU B 290      37.006  61.078  25.360  1.00 50.86           O
ATOM  10592  C   GLU B 290      39.767  56.919  26.220  1.00 61.97           C
ATOM  10593  O   GLU B 290      40.377  57.319  25.243  1.00 65.39           O
ATOM  10594  N   VAL B 291      40.325  56.086  27.090  1.00 62.97           N
ATOM  10596  CA  VAL B 291      41.697  55.643  26.854  1.00 61.83           C
ATOM  10598  CB  VAL B 291      42.336  55.119  28.158  1.00 63.23           C
ATOM  10600  CG1 VAL B 291      43.820  54.897  27.988  1.00 67.30           C
ATOM  10604  CG2 VAL B 291      42.121  56.153  29.281  1.00 66.27           C
ATOM  10608  C   VAL B 291      41.452  54.644  25.731  1.00 59.22           C
ATOM  10609  O   VAL B 291      40.303  54.325  25.463  1.00 56.93           O
ATOM  10610  N   THR B 292      42.468  54.169  25.038  1.00 58.29           N
ATOM  10612  CA  THR B 292      42.227  53.183  23.969  1.00 59.67           C
ATOM  10614  CB  THR B 292      43.311  53.327  22.909  1.00 62.91           C
ATOM  10616  OG1 THR B 292      42.746  53.895  21.712  1.00 63.26           O
ATOM  10618  CG2 THR B 292      43.859  51.953  22.503  1.00 62.53           C
ATOM  10622  C   THR B 292      42.280  51.766  24.494  1.00 57.76           C
ATOM  10623  O   THR B 292      43.004  51.517  25.393  1.00 57.85           O
ATOM  10624  N   GLN B 293      41.535  50.819  23.968  1.00 61.18           N
ATOM  10626  CA  GLN B 293      41.737  49.429  24.428  1.00 66.82           C
ATOM  10628  CB  GLN B 293      43.237  49.258  24.806  1.00 71.42           C
ATOM  10631  CG  GLN B 293      44.001  48.005  24.291  1.00 73.25           C
ATOM  10634  CD  GLN B 293      45.538  48.253  24.118  1.00 76.24           C
ATOM  10635  OE1 GLN B 293      46.178  47.731  23.180  1.00 73.24           O
ATOM  10636  NE2 GLN B 293      46.111  49.048  25.015  1.00 73.09           N
ATOM  10639  C   GLN B 293      40.883  49.060  25.657  1.00 66.33           C
ATOM  10640  O   GLN B 293      40.602  47.896  25.915  1.00 69.45           O
ATOM  10641  N   GLN B 294      40.467  50.082  26.386  1.00 64.46           N
ATOM  10643  CA  GLN B 294      39.810  50.008  27.690  1.00 57.83           C
ATOM  10645  CB  GLN B 294      40.597  51.054  28.485  1.00 58.59           C
ATOM  10648  CG  GLN B 294      40.167  51.551  29.826  1.00 57.32           C
ATOM  10651  CD  GLN B 294      41.418  51.820  30.645  1.00 62.05           C
ATOM  10652  OE1 GLN B 294      41.355  52.330  31.755  1.00 72.12           O
ATOM  10653  NE2 GLN B 294      42.570  51.468  30.084  1.00 60.53           N
ATOM  10656  C   GLN B 294      38.287  50.320  27.655  1.00 57.84           C
ATOM  10657  O   GLN B 294      37.830  51.216  26.906  1.00 56.18           O
ATOM  10658  N   SER B 295      37.490  49.580  28.443  1.00 54.23           N
ATOM  10660  CA  SER B 295      36.050  49.896  28.573  1.00 53.45           C
ATOM  10662  CB  SER B 295      35.178  49.030  27.672  1.00 52.98           C
ATOM  10665  OG  SER B 295      35.006  47.743  28.227  1.00 55.81           O
ATOM  10667  C   SER B 295      35.503  49.796  29.978  1.00 49.98           C
ATOM  10668  O   SER B 295      36.119  49.194  30.832  1.00 47.16           O
ATOM  10669  N   PHE B 296      34.344  50.406  30.220  1.00 48.76           N
ATOM  10671  CA  PHE B 296      33.707  50.270  31.525  1.00 46.25           C
ATOM  10673  CB  PHE B 296      33.853  51.469  32.349  1.00 45.49           C
ATOM  10676  CG  PHE B 296      32.902  52.449  32.027  1.00 44.22           C
ATOM  10677  CD1 PHE B 296      31.723  52.556  32.738  1.00 47.00           C
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ATOM	10679	CE1	PHE	B	296	30.808	53.551	32.396	1.00 39.26	C
ATOM	10681	CZ	PHE	B	296	31.089	54.394	31.341	1.00 40.65	C
ATOM	10683	CE2	PHE	B	296	32.268	54.266	30.638	1.00 37.93	C
ATOM	10685	CD2	PHE	B	296	33.159	53.302	30.984	1.00 39.04	C
ATOM	10687	C	PHE	B	296	32.232	49.871	31.423	1.00 48.20	C
ATOM	10688	O	PHE	B	296	31.778	49.499	30.341	1.00 54.42	O
ATOM	10689	N	ARG	B	297	31.501	49.849	32.544	1.00 45.88	N
ATOM	10691	CA	ARG	B	297	30.130	49.426	32.526	1.00 43.75	C
ATOM	10693	CB	ARG	B	297	30.058	47.928	32.696	1.00 46.61	C
ATOM	10696	CG	ARG	B	297	30.812	47.407	33.875	1.00 52.65	C
ATOM	10699	CD	ARG	B	297	30.556	45.919	34.138	1.00 52.49	C
ATOM	10702	NE	ARG	B	297	30.710	45.525	35.546	1.00 51.81	N
ATOM	10704	CZ	ARG	B	297	31.212	44.358	35.939	1.00 48.75	C
ATOM	10705	NH1	ARG	B	297	31.614	43.487	35.042	1.00 53.62	N
ATOM	10708	NH2	ARG	B	297	31.317	44.050	37.222	1.00 43.21	N
ATOM	10711	C	ARG	B	297	29.314	50.074	33.615	1.00 47.03	C
ATOM	10712	O	ARG	B	297	29.852	50.469	34.676	1.00 48.02	O
ATOM	10713	N	ILE	B	298	28.010	50.187	33.294	1.00 45.30	N
ATOM	10715	CA	ILE	B	298	26.937	50.674	34.150	1.00 44.58	C
ATOM	10717	CB	ILE	B	298	26.152	51.846	33.497	1.00 42.21	C
ATOM	10719	CG1	ILE	B	298	25.434	51.391	32.217	1.00 40.03	C
ATOM	10722	CD1	ILE	B	298	24.548	52.508	31.592	1.00 39.09	C
ATOM	10726	CG2	ILE	B	298	27.077	52.977	33.228	1.00 43.78	C
ATOM	10730	C	ILE	B	298	25.987	49.471	34.284	1.00 45.83	C
ATOM	10731	O	ILE	B	298	25.735	48.749	33.325	1.00 38.32	O
ATOM	10732	N	THR	B	299	25.443	49.270	35.467	1.00 46.26	N
ATOM	10734	CA	THR	B	299	24.696	48.072	35.721	1.00 47.54	C
ATOM	10736	CB	THR	B	299	25.575	47.181	36.607	1.00 52.72	C
ATOM	10738	OG1	THR	B	299	26.587	46.537	35.810	1.00 52.36	O
ATOM	10740	CG2	THR	B	299	24.789	46.025	37.227	1.00 53.54	C
ATOM	10744	C	THR	B	299	23.441	48.459	36.439	1.00 47.53	C
ATOM	10745	O	THR	B	299	23.554	49.107	37.478	1.00 45.39	O
ATOM	10746	N	ILE	B	300	22.265	48.087	35.887	1.00 47.99	N
ATOM	10748	CA	ILE	B	300	20.952	48.367	36.518	1.00 46.84	C
ATOM	10750	CB	ILE	B	300	19.924	49.104	35.627	1.00 46.77	C
ATOM	10752	CG1	ILE	B	300	19.842	48.506	34.244	1.00 45.61	C
ATOM	10755	CD1	ILE	B	300	18.475	48.734	33.633	1.00 46.44	C
ATOM	10759	CG2	ILE	B	300	20.194	50.538	35.586	1.00 52.09	C
ATOM	10763	C	ILE	B	300	20.186	47.167	36.971	1.00 44.73	C
ATOM	10764	O	ILE	B	300	20.413	46.046	36.543	1.00 43.89	O
ATOM	10765	N	LEU	B	301	19.231	47.509	37.816	1.00 46.21	N
ATOM	10767	CA	LEU	B	301	18.355	46.631	38.524	1.00 44.01	C
ATOM	10769	CB	LEU	B	301	18.303	47.094	39.973	1.00 47.01	C
ATOM	10772	CG	LEU	B	301	19.419	47.990	40.471	1.00 40.39	C
ATOM	10774	CD1	LEU	B	301	19.093	48.496	41.828	1.00 40.91	C
ATOM	10778	CD2	LEU	B	301	20.671	47.123	40.543	1.00 47.03	C
ATOM	10782	C	LEU	B	301	16.936	46.740	38.060	1.00 46.44	C
ATOM	10783	O	LEU	B	301	16.540	47.644	37.336	1.00 43.22	O
ATOM	10784	N	PRO	B	302	16.136	45.819	38.547	1.00 51.74	N
ATOM	10785	CA	PRO	B	302	14.748	45.738	38.120	1.00 47.89	C
ATOM	10787	CB	PRO	B	302	14.282	44.417	38.721	1.00 51.94	C
ATOM	10790	CG	PRO	B	302	15.105	44.241	39.916	1.00 53.36	C
ATOM	10793	CD	PRO	B	302	16.475	44.793	39.553	1.00 53.46	C
ATOM	10796	C	PRO	B	302	14.008	46.884	38.695	1.00 43.06	C
ATOM	10797	O	PRO	B	302	12.940	47.149	38.231	1.00 42.92	O
ATOM	10798	N	GLN	B	303	14.582	47.561	39.681	1.00 42.87	N
ATOM	10800	CA	GLN	B	303	13.930	48.707	40.253	1.00 42.11	C

ATOM	10802	CB	GLN	B	303	14.625	49.192	41.504	1.00	40.42	C
ATOM	10805	CG	GLN	B	303	14.037	48.667	42.758	1.00	40.53	C
ATOM	10808	CD	GLN	B	303	14.744	47.461	43.285	1.00	43.06	C
ATOM	10809	OE1	GLN	B	303	15.546	46.827	42.579	1.00	39.84	O
ATOM	10810	NE2	GLN	B	303	14.449	47.126	44.543	1.00	43.69	N
ATOM	10813	C	GLN	B	303	14.061	49.794	39.271	1.00	45.98	C
ATOM	10814	O	GLN	B	303	13.689	50.934	39.528	1.00	53.51	O
ATOM	10815	N	GLN	B	304	14.602	49.469	38.129	1.00	47.03	N
ATOM	10817	CA	GLN	B	304	14.815	50.478	37.174	1.00	46.42	C
ATOM	10819	CB	GLN	B	304	16.294	50.534	36.921	1.00	48.97	C
ATOM	10822	CG	GLN	B	304	16.894	51.900	37.204	1.00	45.42	C
ATOM	10825	CD	GLN	B	304	17.282	52.050	38.613	1.00	42.60	C
ATOM	10826	OE1	GLN	B	304	16.869	52.990	39.271	1.00	55.93	O
ATOM	10827	NE2	GLN	B	304	18.088	51.152	39.088	1.00	43.68	N
ATOM	10830	C	GLN	B	304	14.081	50.144	35.904	1.00	51.85	C
ATOM	10831	O	GLN	B	304	13.344	51.021	35.361	1.00	53.64	O
ATOM	10832	N	TYR	B	305	14.276	48.905	35.420	1.00	49.13	N
ATOM	10834	CA	TYR	B	305	13.624	48.452	34.192	1.00	48.73	C
ATOM	10836	CB	TYR	B	305	14.445	47.418	33.409	1.00	48.24	C
ATOM	10839	CG	TYR	B	305	14.696	46.120	34.075	1.00	45.68	C
ATOM	10840	CD1	TYR	B	305	13.829	45.057	33.906	1.00	49.08	C
ATOM	10842	CE1	TYR	B	305	14.056	43.872	34.505	1.00	51.64	C
ATOM	10844	CZ	TYR	B	305	15.186	43.711	35.301	1.00	59.15	C
ATOM	10845	OH	TYR	B	305	15.454	42.500	35.932	1.00	61.84	O
ATOM	10847	CE2	TYR	B	305	16.063	44.765	35.467	1.00	56.26	C
ATOM	10849	CD2	TYR	B	305	15.805	45.948	34.857	1.00	48.39	C
ATOM	10851	C	TYR	B	305	12.264	47.897	34.416	1.00	51.41	C
ATOM	10852	O	TYR	B	305	11.637	47.411	33.467	1.00	50.10	O
ATOM	10853	N	LEU	B	306	11.807	47.952	35.662	1.00	51.83	N
ATOM	10855	CA	LEU	B	306	10.481	47.474	35.996	1.00	49.68	C
ATOM	10857	CB	LEU	B	306	10.508	46.481	37.129	1.00	52.01	C
ATOM	10860	CG	LEU	B	306	10.687	45.019	36.827	1.00	51.56	C
ATOM	10862	CD1	LEU	B	306	10.108	44.267	38.015	1.00	53.34	C
ATOM	10866	CD2	LEU	B	306	9.924	44.708	35.605	1.00	56.13	C
ATOM	10870	C	LEU	B	306	9.884	48.717	36.499	1.00	50.94	C
ATOM	10871	O	LEU	B	306	10.282	49.209	37.547	1.00	50.28	O
ATOM	10872	N	ARG	B	307	8.908	49.212	35.764	1.00	49.70	N
ATOM	10874	CA	ARG	B	307	8.419	50.538	35.974	1.00	44.12	C
ATOM	10876	CB	ARG	B	307	8.456	51.259	34.633	1.00	38.83	C
ATOM	10879	CG	ARG	B	307	7.667	52.549	34.573	1.00	42.47	C
ATOM	10882	CD	ARG	B	307	7.695	53.176	33.188	1.00	46.67	C
ATOM	10885	NE	ARG	B	307	6.899	52.434	32.208	1.00	49.09	N
ATOM	10887	CZ	ARG	B	307	5.744	52.870	31.717	1.00	55.81	C
ATOM	10888	NH1	ARG	B	307	5.245	54.035	32.116	1.00	54.72	N
ATOM	10891	NH2	ARG	B	307	5.072	52.145	30.825	1.00	58.11	N
ATOM	10894	C	ARG	B	307	7.038	50.495	36.548	1.00	46.97	C
ATOM	10895	O	ARG	B	307	6.218	49.805	35.992	1.00	51.21	O
ATOM	10896	N	PRO	B	308	6.799	51.239	37.629	1.00	46.48	N
ATOM	10897	CA	PRO	B	308	5.547	51.289	38.338	1.00	50.59	C
ATOM	10899	CB	PRO	B	308	5.892	52.087	39.593	1.00	48.57	C
ATOM	10902	CG	PRO	B	308	7.261	52.256	39.619	1.00	49.01	C
ATOM	10905	CD	PRO	B	308	7.773	52.123	38.259	1.00	50.08	C
ATOM	10908	C	PRO	B	308	4.465	52.087	37.633	1.00	59.61	C
ATOM	10909	O	PRO	B	308	4.792	52.993	36.867	1.00	64.89	O
ATOM	10910	N	VAL	B	309	3.200	51.774	37.946	1.00	62.04	N
ATOM	10912	CA	VAL	B	309	2.026	52.332	37.288	1.00	64.12	C
ATOM	10914	CB	VAL	B	309	1.720	51.597	35.938	1.00	65.00	C

ATOM	10916	CG1	VAL	B	309	2.994	51.101	35.294	1.00	63.78	C
ATOM	10920	CG2	VAL	B	309	0.825	50.415	36.150	1.00	64.85	C
ATOM	10924	C	VAL	B	309	0.810	52.137	38.173	1.00	64.34	C
ATOM	10925	O	VAL	B	309	0.764	51.261	39.002	1.00	55.43	O
ATOM	10926	N	GLU	B	310	-0.215	52.936	37.977	1.00	70.92	N
ATOM	10928	CA	GLU	B	310	-1.368	52.762	38.834	1.00	74.98	C
ATOM	10930	CB	GLU	B	310	-2.380	53.877	38.651	1.00	76.84	C
ATOM	10933	CG	GLU	B	310	-3.286	54.103	39.862	1.00	82.90	C
ATOM	10936	CD	GLU	B	310	-2.610	53.829	41.205	1.00	84.06	C
ATOM	10937	OE1	GLU	B	310	-2.619	52.653	41.631	1.00	90.22	O
ATOM	10938	OE2	GLU	B	310	-2.082	54.774	41.841	1.00	83.28	O
ATOM	10939	C	GLU	B	310	-1.978	51.443	38.473	1.00	76.13	C
ATOM	10940	O	GLU	B	310	-1.908	51.029	37.296	1.00	76.20	O
ATOM	10941	N	ASP	B	311	-2.558	50.766	39.470	1.00	78.57	N
ATOM	10943	CA	ASP	B	311	-3.306	49.539	39.182	1.00	82.17	C
ATOM	10945	CB	ASP	B	311	-3.558	48.684	40.441	1.00	82.68	C
ATOM	10948	CG	ASP	B	311	-3.918	47.211	40.111	1.00	83.41	C
ATOM	10949	OD1	ASP	B	311	-4.210	46.905	38.926	1.00	86.04	O
ATOM	10950	OD2	ASP	B	311	-3.931	46.295	40.976	1.00	76.70	O
ATOM	10951	C	ASP	B	311	-4.643	49.948	38.570	1.00	83.78	C
ATOM	10952	O	ASP	B	311	-5.174	51.026	38.867	1.00	81.54	O
ATOM	10953	N	VAL	B	312	-5.172	49.100	37.707	1.00	85.51	N
ATOM	10955	CA	VAL	B	312	-6.496	49.341	37.181	1.00	88.99	C
ATOM	10957	CB	VAL	B	312	-7.065	48.064	36.499	1.00	88.37	C
ATOM	10959	CG1	VAL	B	312	-8.222	48.405	35.595	1.00	88.24	C
ATOM	10963	CG2	VAL	B	312	-5.979	47.356	35.697	1.00	88.52	C
ATOM	10967	C	VAL	B	312	-7.361	49.769	38.383	1.00	92.51	C
ATOM	10968	O	VAL	B	312	-7.811	50.910	38.482	1.00	94.93	O
ATOM	10969	N	ALA	B	313	-7.563	48.866	39.331	1.00	96.03	N
ATOM	10971	CA	ALA	B	313	-8.432	49.151	40.470	1.00	97.31	C
ATOM	10973	CB	ALA	B	313	-8.438	47.916	41.424	1.00	95.55	C
ATOM	10977	C	ALA	B	313	-8.055	50.404	41.281	1.00	98.18	C
ATOM	10978	O	ALA	B	313	-8.868	50.852	42.088	1.00	102.35	O
ATOM	10979	N	THR	B	314	-6.864	50.971	41.033	1.00	97.48	N
ATOM	10981	CA	THR	B	314	-6.102	51.818	42.013	1.00	96.57	C
ATOM	10983	CB	THR	B	314	-6.505	53.356	42.037	1.00	95.77	C
ATOM	10985	OG1	THR	B	314	-7.547	53.635	42.985	1.00	95.94	O
ATOM	10987	CG2	THR	B	314	-7.040	53.811	40.662	1.00	95.13	C
ATOM	10991	C	THR	B	314	-6.028	51.095	43.417	1.00	94.99	C
ATOM	10992	O	THR	B	314	-6.148	51.703	44.505	1.00	89.26	O
ATOM	10993	N	SER	B	315	-5.810	49.767	43.307	1.00	94.79	N
ATOM	10995	CA	SER	B	315	-5.731	48.796	44.424	1.00	93.42	C
ATOM	10997	CB	SER	B	315	-5.712	47.335	43.911	1.00	93.27	C
ATOM	11000	OG	SER	B	315	-4.568	47.043	43.118	1.00	85.86	O
ATOM	11002	C	SER	B	315	-4.516	49.033	45.306	1.00	93.27	C
ATOM	11003	O	SER	B	315	-3.681	49.893	44.995	1.00	94.12	O
ATOM	11004	N	GLN	B	316	-4.410	48.279	46.404	1.00	91.57	N
ATOM	11006	CA	GLN	B	316	-3.318	48.533	47.354	1.00	91.29	C
ATOM	11008	CB	GLN	B	316	-3.756	48.294	48.839	1.00	92.38	C
ATOM	11011	CG	GLN	B	316	-4.329	49.622	49.500	1.00	93.01	C
ATOM	11014	CD	GLN	B	316	-4.619	49.576	51.022	1.00	91.31	C
ATOM	11015	OE1	GLN	B	316	-4.691	48.505	51.626	1.00	90.86	O
ATOM	11016	NE2	GLN	B	316	-4.791	50.762	51.629	1.00	89.33	N
ATOM	11019	C	GLN	B	316	-2.010	47.823	46.923	1.00	85.48	C
ATOM	11020	O	GLN	B	316	-0.926	48.158	47.397	1.00	84.70	O
ATOM	11021	N	ASP	B	317	-2.129	46.872	46.001	1.00	78.17	N
ATOM	11023	CA	ASP	B	317	-0.980	46.180	45.434	1.00	76.19	C

ATOM	11025	CB	ASP	B	317	-1.492	45.121	44.472	1.00 73.46	C
ATOM	11028	CG	ASP	B	317	-2.262	44.078	45.184	1.00 72.17	C
ATOM	11029	OD1	ASP	B	317	-2.407	44.252	46.424	1.00 70.34	O
ATOM	11030	OD2	ASP	B	317	-2.743	43.073	44.620	1.00 70.32	O
ATOM	11031	C	ASP	B	317	0.034	47.099	44.728	1.00 76.88	C
ATOM	11032	O	ASP	B	317	-0.247	48.268	44.447	1.00 82.57	O
ATOM	11033	N	ASP	B	318	1.216	46.558	44.448	1.00 74.00	N
ATOM	11035	CA	ASP	B	318	2.304	47.312	43.838	1.00 68.80	C
ATOM	11037	CB	ASP	B	318	3.577	47.191	44.686	1.00 70.82	C
ATOM	11040	CG	ASP	B	318	3.534	48.035	45.962	1.00 71.07	C
ATOM	11041	OD1	ASP	B	318	4.185	47.662	46.968	1.00 70.80	O
ATOM	11042	OD2	ASP	B	318	2.884	49.087	46.052	1.00 73.30	O
ATOM	11043	C	ASP	B	318	2.511	46.719	42.455	1.00 65.62	C
ATOM	11044	O	ASP	B	318	3.019	45.608	42.319	1.00 60.87	O
ATOM	11045	N	CYS	B	319	2.126	47.456	41.419	1.00 61.57	N
ATOM	11047	CA	CYS	B	319	2.133	46.872	40.093	1.00 57.97	C
ATOM	11049	CB	CYS	B	319	0.736	46.962	39.463	1.00 61.08	C
ATOM	11052	SG	CYS	B	319	-0.613	46.137	40.403	1.00 68.12	S
ATOM	11053	C	CYS	B	319	3.220	47.524	39.269	1.00 52.64	C
ATOM	11054	O	CYS	B	319	3.745	48.540	39.662	1.00 52.88	O
ATOM	11055	N	TYR	B	320	3.560	46.945	38.130	1.00 47.04	N
ATOM	11057	CA	TYR	B	320	4.728	47.385	37.415	1.00 50.79	C
ATOM	11059	CB	TYR	B	320	6.042	46.773	38.010	1.00 51.87	C
ATOM	11062	CG	TYR	B	320	6.341	47.116	39.469	1.00 44.28	C
ATOM	11063	CD1	TYR	B	320	5.861	46.331	40.512	1.00 51.75	C
ATOM	11065	CE1	TYR	B	320	6.125	46.637	41.826	1.00 48.81	C
ATOM	11067	CZ	TYR	B	320	6.873	47.737	42.090	1.00 51.67	C
ATOM	11068	OH	TYR	B	320	7.161	48.090	43.379	1.00 63.11	O
ATOM	11070	CE2	TYR	B	320	7.351	48.512	41.073	1.00 46.32	C
ATOM	11072	CD2	TYR	B	320	7.082	48.188	39.779	1.00 35.82	C
ATOM	11074	C	TYR	B	320	4.626	46.882	36.016	1.00 52.12	C
ATOM	11075	O	TYR	B	320	4.082	45.809	35.792	1.00 56.07	O
ATOM	11076	N	LYS	B	321	5.164	47.667	35.085	1.00 53.09	N
ATOM	11078	CA	LYS	B	321	5.216	47.294	33.708	1.00 51.68	C
ATOM	11080	CB	LYS	B	321	4.684	48.430	32.832	1.00 57.10	C
ATOM	11083	CG	LYS	B	321	3.102	48.538	32.635	1.00 61.86	C
ATOM	11086	CD	LYS	B	321	2.727	49.287	31.269	1.00 67.16	C
ATOM	11089	CE	LYS	B	321	1.532	50.345	31.323	1.00 70.93	C
ATOM	11092	NZ	LYS	B	321	1.847	51.846	31.459	1.00 71.64	N
ATOM	11096	C	LYS	B	321	6.681	47.049	33.421	1.00 49.27	C
ATOM	11097	O	LYS	B	321	7.544	47.694	33.987	1.00 54.13	O
ATOM	11098	N	PHE	B	322	6.961	46.083	32.568	1.00 45.37	N
ATOM	11100	CA	PHE	B	322	8.291	45.825	32.087	1.00 45.16	C
ATOM	11102	CB	PHE	B	322	8.218	44.478	31.390	1.00 41.79	C
ATOM	11105	CG	PHE	B	322	9.528	43.929	30.875	1.00 42.80	C
ATOM	11106	CD1	PHE	B	322	10.627	43.747	31.697	1.00 41.54	C
ATOM	11108	CE1	PHE	B	322	11.812	43.202	31.188	1.00 46.06	C
ATOM	11110	CZ	PHE	B	322	11.895	42.839	29.861	1.00 44.89	C
ATOM	11112	CE2	PHE	B	322	10.803	43.031	29.042	1.00 34.54	C
ATOM	11114	CD2	PHE	B	322	9.633	43.549	29.547	1.00 37.25	C
ATOM	11116	C	PHE	B	322	8.606	46.957	31.087	1.00 48.75	C
ATOM	11117	O	PHE	B	322	7.894	47.126	30.099	1.00 56.32	O
ATOM	11118	N	ALA	B	323	9.651	47.736	31.346	1.00 49.68	N
ATOM	11120	CA	ALA	B	323	10.098	48.768	30.413	1.00 46.88	C
ATOM	11122	CB	ALA	B	323	10.314	50.060	31.172	1.00 46.63	C
ATOM	11126	C	ALA	B	323	11.377	48.461	29.609	1.00 45.38	C
ATOM	11127	O	ALA	B	323	12.397	49.107	29.792	1.00 55.92	O

ATOM	11128	N	ILE	B	324	11.332	47.502	28.713	1.00 48.17	N
ATOM	11130	CA	ILE	B	324	12.466	47.206	27.845	1.00 46.85	C
ATOM	11132	CB	ILE	B	324	13.345	46.064	28.445	1.00 44.62	C
ATOM	11134	CG1	ILE	B	324	14.171	46.476	29.668	1.00 51.60	C
ATOM	11137	CD1	ILE	B	324	15.228	45.430	30.124	1.00 57.66	C
ATOM	11141	CG2	ILE	B	324	14.315	45.545	27.437	1.00 40.76	C
ATOM	11145	C	ILE	B	324	11.754	46.719	26.575	1.00 49.80	C
ATOM	11146	O	ILE	B	324	11.146	45.664	26.644	1.00 50.08	O
ATOM	11147	N	SER	B	325	11.794	47.464	25.446	1.00 50.30	N
ATOM	11149	CA	SER	B	325	11.092	47.067	24.174	1.00 50.46	C
ATOM	11151	CB	SER	B	325	10.034	48.087	23.799	1.00 49.93	C
ATOM	11154	OG	SER	B	325	9.963	49.115	24.782	1.00 59.75	O
ATOM	11156	C	SER	B	325	11.954	46.918	22.928	1.00 50.03	C
ATOM	11157	O	SER	B	325	13.119	47.211	22.936	1.00 53.12	O
ATOM	11158	N	GLN	B	326	11.382	46.465	21.828	1.00 56.80	N
ATOM	11160	CA	GLN	B	326	12.193	46.354	20.631	1.00 59.61	C
ATOM	11162	CB	GLN	B	326	11.717	45.312	19.617	1.00 60.94	C
ATOM	11165	CG	GLN	B	326	10.391	44.672	19.856	1.00 66.47	C
ATOM	11168	CD	GLN	B	326	10.292	43.338	19.116	1.00 74.18	C
ATOM	11169	OE1	GLN	B	326	10.878	43.178	18.023	1.00 71.53	O
ATOM	11170	NE2	GLN	B	326	9.553	42.374	19.707	1.00 75.43	N
ATOM	11173	C	GLN	B	326	12.238	47.707	19.965	1.00 60.48	C
ATOM	11174	O	GLN	B	326	11.435	48.586	20.264	1.00 57.03	O
ATOM	11175	N	SER	B	327	13.198	47.844	19.064	1.00 57.25	N
ATOM	11177	CA	SER	B	327	13.413	49.051	18.331	1.00 55.49	C
ATOM	11179	CB	SER	B	327	14.670	49.752	18.824	1.00 53.74	C
ATOM	11182	OG	SER	B	327	15.511	50.178	17.714	1.00 49.78	O
ATOM	11184	C	SER	B	327	13.654	48.642	16.914	1.00 58.77	C
ATOM	11185	O	SER	B	327	14.087	47.518	16.656	1.00 59.83	O
ATOM	11186	N	SER	B	328	13.379	49.541	15.984	1.00 59.17	N
ATOM	11188	CA	SER	B	328	13.786	49.287	14.625	1.00 60.92	C
ATOM	11190	CB	SER	B	328	12.606	49.365	13.631	1.00 63.09	C
ATOM	11193	OG	SER	B	328	11.492	50.158	14.067	1.00 65.22	O
ATOM	11195	C	SER	B	328	14.911	50.259	14.300	1.00 60.93	C
ATOM	11196	O	SER	B	328	15.657	50.066	13.337	1.00 64.26	O
ATOM	11197	N	THR	B	329	15.076	51.287	15.131	1.00 61.31	N
ATOM	11199	CA	THR	B	329	16.051	52.372	14.845	1.00 59.73	C
ATOM	11201	CB	THR	B	329	15.359	53.753	14.900	1.00 60.54	C
ATOM	11203	OG1	THR	B	329	14.584	53.860	16.105	1.00 58.14	O
ATOM	11205	CG2	THR	B	329	14.332	53.922	13.743	1.00 56.98	C
ATOM	11209	C	THR	B	329	17.278	52.431	15.749	1.00 58.54	C
ATOM	11210	O	THR	B	329	17.933	53.459	15.778	1.00 61.65	O
ATOM	11211	N	GLY	B	330	17.567	51.325	16.460	1.00 58.25	N
ATOM	11213	CA	GLY	B	330	18.695	51.165	17.351	1.00 50.47	C
ATOM	11216	C	GLY	B	330	18.313	51.180	18.850	1.00 52.50	C
ATOM	11217	O	GLY	B	330	17.128	51.312	19.252	1.00 56.44	O
ATOM	11218	N	THR	B	331	19.343	51.046	19.686	1.00 45.78	N
ATOM	11220	CA	THR	B	331	19.241	51.078	21.119	1.00 41.85	C
ATOM	11222	CB	THR	B	331	20.630	50.637	21.677	1.00 41.95	C
ATOM	11224	OG1	THR	B	331	20.726	49.210	21.674	1.00 47.12	O
ATOM	11226	CG2	THR	B	331	20.797	50.988	23.053	1.00 37.45	C
ATOM	11230	C	THR	B	331	18.966	52.502	21.548	1.00 41.86	C
ATOM	11231	O	THR	B	331	19.675	53.422	21.115	1.00 42.95	O
ATOM	11232	N	VAL	B	332	17.961	52.691	22.401	1.00 37.91	N
ATOM	11234	CA	VAL	B	332	17.747	53.961	23.049	1.00 36.68	C
ATOM	11236	CB	VAL	B	332	16.372	54.558	22.862	1.00 38.12	C
ATOM	11238	CG1	VAL	B	332	16.453	56.041	22.986	1.00 37.57	C

ATOM	11242	CG2	VAL	B	332	15.785	54.214	21.527	1.00	42.36	C
ATOM	11246	C	VAL	B	332	17.891	53.693	24.528	1.00	43.79	C
ATOM	11247	O	VAL	B	332	17.094	52.953	25.121	1.00	44.24	O
ATOM	11248	N	MET	B	333	18.931	54.302	25.104	1.00	46.87	N
ATOM	11250	CA	MET	B	333	19.231	54.228	26.508	1.00	43.89	C
ATOM	11252	CB	MET	B	333	20.720	54.492	26.737	1.00	43.44	C
ATOM	11255	CG	MET	B	333	21.665	53.638	25.852	1.00	44.02	C
ATOM	11258	SD	MET	B	333	23.458	53.802	26.313	1.00	55.34	S
ATOM	11259	CE	MET	B	333	23.460	53.010	27.911	1.00	55.88	C
ATOM	11263	C	MET	B	333	18.368	55.332	27.098	1.00	48.39	C
ATOM	11264	O	MET	B	333	18.802	56.474	27.222	1.00	53.18	O
ATOM	11265	N	GLY	B	334	17.134	54.979	27.451	1.00	50.35	N
ATOM	11267	CA	GLY	B	334	16.145	55.935	27.929	1.00	49.72	C
ATOM	11270	C	GLY	B	334	16.128	56.215	29.401	1.00	48.78	C
ATOM	11271	O	GLY	B	334	17.099	55.961	30.105	1.00	58.24	O
ATOM	11272	N	ALA	B	335	14.985	56.698	29.865	1.00	48.59	N
ATOM	11274	CA	ALA	B	335	14.888	57.271	31.193	1.00	50.40	C
ATOM	11276	CB	ALA	B	335	13.612	58.070	31.297	1.00	48.07	C
ATOM	11280	C	ALA	B	335	15.002	56.266	32.338	1.00	53.66	C
ATOM	11281	O	ALA	B	335	15.461	56.596	33.415	1.00	58.54	O
ATOM	11282	N	VAL	B	336	14.586	55.035	32.135	1.00	53.31	N
ATOM	11284	CA	VAL	B	336	14.750	54.108	33.224	1.00	55.63	C
ATOM	11286	CB	VAL	B	336	13.937	52.808	33.058	1.00	58.93	C
ATOM	11288	CG1	VAL	B	336	12.409	53.162	33.026	1.00	56.89	C
ATOM	11292	CG2	VAL	B	336	14.432	51.979	31.840	1.00	58.15	C
ATOM	11296	C	VAL	B	336	16.202	53.785	33.317	1.00	53.53	C
ATOM	11297	O	VAL	B	336	16.666	53.274	34.321	1.00	57.81	O
ATOM	11298	N	ILE	B	337	16.946	54.059	32.267	1.00	50.75	N
ATOM	11300	CA	ILE	B	337	18.367	53.801	32.370	1.00	46.62	C
ATOM	11302	CB	ILE	B	337	19.056	53.626	30.992	1.00	43.03	C
ATOM	11304	CG1	ILE	B	337	18.218	52.737	30.091	1.00	45.86	C
ATOM	11307	CD1	ILE	B	337	17.973	51.333	30.721	1.00	45.07	C
ATOM	11311	CG2	ILE	B	337	20.355	52.901	31.105	1.00	44.92	C
ATOM	11315	C	ILE	B	337	18.785	55.035	33.102	1.00	48.16	C
ATOM	11316	O	ILE	B	337	19.334	54.925	34.164	1.00	51.02	O
ATOM	11317	N	MET	B	338	18.460	56.219	32.583	1.00	45.36	N
ATOM	11319	CA	MET	B	338	18.968	57.443	33.185	1.00	44.08	C
ATOM	11321	CB	MET	B	338	18.460	58.679	32.452	1.00	47.75	C
ATOM	11324	CG	MET	B	338	18.833	58.740	31.003	1.00	48.46	C
ATOM	11327	SD	MET	B	338	18.465	60.332	30.349	1.00	59.21	S
ATOM	11328	CE	MET	B	338	19.867	61.227	30.953	1.00	56.77	C
ATOM	11332	C	MET	B	338	18.647	57.631	34.647	1.00	42.50	C
ATOM	11333	O	MET	B	338	19.328	58.383	35.313	1.00	49.24	O
ATOM	11334	N	GLU	B	339	17.629	56.964	35.148	1.00	42.14	N
ATOM	11336	CA	GLU	B	339	17.161	57.177	36.515	1.00	46.39	C
ATOM	11338	CB	GLU	B	339	15.730	56.656	36.689	1.00	50.35	C
ATOM	11341	CG	GLU	B	339	14.662	57.340	35.854	1.00	53.30	C
ATOM	11344	CD	GLU	B	339	13.241	57.029	36.346	1.00	63.08	C
ATOM	11345	OE1	GLU	B	339	12.502	57.979	36.701	1.00	64.18	O
ATOM	11346	OE2	GLU	B	339	12.851	55.834	36.381	1.00	65.96	O
ATOM	11347	C	GLU	B	339	18.056	56.512	37.539	1.00	48.49	C
ATOM	11348	O	GLU	B	339	17.999	56.842	38.714	1.00	52.78	O
ATOM	11349	N	GLY	B	340	18.871	55.565	37.093	1.00	47.81	N
ATOM	11351	CA	GLY	B	340	19.898	54.993	37.941	1.00	48.44	C
ATOM	11354	C	GLY	B	340	21.164	55.846	38.027	1.00	49.58	C
ATOM	11355	O	GLY	B	340	21.952	55.773	38.986	1.00	46.13	O
ATOM	11356	N	PHE	B	341	21.369	56.684	37.027	1.00	49.56	N

ATOM	11358	CA	PHE	B	341	22.598	57.449	36.967	1.00	48.86	C
ATOM	11360	CB	PHE	B	341	23.349	56.930	35.754	1.00	48.52	C
ATOM	11363	CG	PHE	B	341	23.480	55.442	35.737	1.00	47.00	C
ATOM	11364	CD1	PHE	B	341	22.679	54.674	34.926	1.00	50.33	C
ATOM	11366	CE1	PHE	B	341	22.791	53.291	34.908	1.00	47.28	C
ATOM	11368	CZ	PHE	B	341	23.719	52.688	35.724	1.00	49.94	C
ATOM	11370	CE2	PHE	B	341	24.525	53.452	36.534	1.00	45.50	C
ATOM	11372	CD2	PHE	B	341	24.408	54.811	36.540	1.00	44.62	C
ATOM	11374	C	PHE	B	341	22.469	58.975	36.861	1.00	47.63	C
ATOM	11375	O	PHE	B	341	21.482	59.485	36.344	1.00	50.69	O
ATOM	11376	N	TYR	B	342	23.470	59.686	37.372	1.00	44.30	N
ATOM	11378	CA	TYR	B	342	23.694	61.096	37.030	1.00	45.47	C
ATOM	11380	CB	TYR	B	342	24.640	61.771	38.026	1.00	43.43	C
ATOM	11383	CG	TYR	B	342	24.793	63.285	37.896	1.00	41.05	C
ATOM	11384	CD1	TYR	B	342	23.724	64.092	37.871	1.00	40.92	C
ATOM	11386	CE1	TYR	B	342	23.860	65.448	37.770	1.00	46.50	C
ATOM	11388	CZ	TYR	B	342	25.084	66.025	37.693	1.00	49.06	C
ATOM	11389	OH	TYR	B	342	25.178	67.402	37.584	1.00	46.57	O
ATOM	11391	CE2	TYR	B	342	26.186	65.239	37.731	1.00	47.37	C
ATOM	11393	CD2	TYR	B	342	26.036	63.881	37.832	1.00	48.16	C
ATOM	11395	C	TYR	B	342	24.419	60.996	35.706	1.00	42.55	C
ATOM	11396	O	TYR	B	342	25.389	60.268	35.650	1.00	46.12	O
ATOM	11397	N	VAL	B	343	23.952	61.690	34.665	1.00	41.14	N
ATOM	11399	CA	VAL	B	343	24.592	61.717	33.333	1.00	38.62	C
ATOM	11401	CB	VAL	B	343	23.618	61.281	32.277	1.00	38.70	C
ATOM	11403	CG1	VAL	B	343	24.369	61.080	30.981	1.00	40.70	C
ATOM	11407	CG2	VAL	B	343	22.943	59.960	32.703	1.00	42.16	C
ATOM	11411	C	VAL	B	343	25.070	63.099	32.869	1.00	36.25	C
ATOM	11412	O	VAL	B	343	24.319	64.079	32.905	1.00	43.95	O
ATOM	11413	N	VAL	B	344	26.305	63.192	32.393	1.00	37.32	N
ATOM	11415	CA	VAL	B	344	26.868	64.477	31.990	1.00	29.38	C
ATOM	11417	CB	VAL	B	344	28.183	64.693	32.583	1.00	30.42	C
ATOM	11419	CG1	VAL	B	344	28.516	66.115	32.541	1.00	36.77	C
ATOM	11423	CG2	VAL	B	344	28.156	64.296	34.036	1.00	38.24	C
ATOM	11427	C	VAL	B	344	27.087	64.507	30.545	1.00	31.36	C
ATOM	11428	O	VAL	B	344	27.722	63.618	30.003	1.00	36.95	O
ATOM	11429	N	PHE	B	345	26.543	65.555	29.935	1.00	38.83	N
ATOM	11431	CA	PHE	B	345	26.611	65.855	28.494	1.00	41.14	C
ATOM	11433	CB	PHE	B	345	25.217	66.193	27.962	1.00	41.42	C
ATOM	11436	CG	PHE	B	345	24.189	65.146	28.278	1.00	44.84	C
ATOM	11437	CD1	PHE	B	345	23.861	64.165	27.366	1.00	42.09	C
ATOM	11439	CE1	PHE	B	345	22.953	63.237	27.669	1.00	34.11	C
ATOM	11441	CZ	PHE	B	345	22.320	63.238	28.870	1.00	41.08	C
ATOM	11443	CE2	PHE	B	345	22.617	64.181	29.785	1.00	46.16	C
ATOM	11445	CD2	PHE	B	345	23.551	65.136	29.495	1.00	43.84	C
ATOM	11447	C	PHE	B	345	27.590	67.007	28.227	1.00	44.97	C
ATOM	11448	O	PHE	B	345	27.217	68.145	28.007	1.00	43.88	O
ATOM	11449	N	ASP	B	346	28.852	66.609	28.241	1.00	47.40	N
ATOM	11451	CA	ASP	B	346	30.032	67.436	28.149	1.00	48.51	C
ATOM	11453	CB	ASP	B	346	31.139	66.623	28.833	1.00	52.73	C
ATOM	11456	CG	ASP	B	346	32.313	67.433	29.321	1.00	60.43	C
ATOM	11457	OD1	ASP	B	346	32.437	68.640	28.982	1.00	69.63	O
ATOM	11458	OD2	ASP	B	346	33.173	66.892	30.074	1.00	54.36	O
ATOM	11459	C	ASP	B	346	30.301	67.629	26.668	1.00	47.09	C
ATOM	11460	O	ASP	B	346	31.160	66.996	26.076	1.00	45.68	O
ATOM	11461	N	ARG	B	347	29.506	68.517	26.081	1.00	47.52	N
ATOM	11463	CA	ARG	B	347	29.637	68.935	24.701	1.00	43.73	C

ATOM	11465	CB	ARG	B	347	28.570	69.962	24.423	1.00	43.30	C
ATOM	11468	CG	ARG	B	347	27.202	69.356	24.324	1.00	42.11	C
ATOM	11471	CD	ARG	B	347	26.079	70.326	24.660	1.00	46.02	C
ATOM	11474	NE	ARG	B	347	25.906	71.409	23.697	1.00	46.95	N
ATOM	11476	CZ	ARG	B	347	25.579	71.248	22.418	1.00	49.44	C
ATOM	11477	NH1	ARG	B	347	25.401	70.035	21.910	1.00	48.15	N
ATOM	11480	NH2	ARG	B	347	25.433	72.313	21.632	1.00	51.53	N
ATOM	11483	C	ARG	B	347	30.988	69.558	24.396	1.00	48.71	C
ATOM	11484	O	ARG	B	347	31.492	69.455	23.286	1.00	49.46	O
ATOM	11485	N	ALA	B	348	31.578	70.217	25.379	1.00	49.23	N
ATOM	11487	CA	ALA	B	348	32.842	70.875	25.172	1.00	46.88	C
ATOM	11489	CB	ALA	B	348	33.226	71.682	26.425	1.00	48.10	C
ATOM	11493	C	ALA	B	348	33.901	69.837	24.849	1.00	53.46	C
ATOM	11494	O	ALA	B	348	34.834	70.103	24.076	1.00	54.08	O
ATOM	11495	N	ARG	B	349	33.768	68.641	25.426	1.00	54.97	N
ATOM	11497	CA	ARG	B	349	34.773	67.599	25.178	1.00	51.50	C
ATOM	11499	CB	ARG	B	349	35.395	67.153	26.517	1.00	50.57	C
ATOM	11502	CG	ARG	B	349	36.426	68.192	27.060	1.00	50.96	C
ATOM	11505	CD	ARG	B	349	36.963	67.948	28.466	1.00	53.35	C
ATOM	11508	NE	ARG	B	349	37.988	66.891	28.506	1.00	58.63	N
ATOM	11510	CZ	ARG	B	349	38.667	66.554	29.599	1.00	60.78	C
ATOM	11511	NH1	ARG	B	349	38.427	67.189	30.747	1.00	54.92	N
ATOM	11514	NH2	ARG	B	349	39.585	65.593	29.545	1.00	61.55	N
ATOM	11517	C	ARG	B	349	34.290	66.413	24.305	1.00	50.33	C
ATOM	11518	O	ARG	B	349	34.994	65.398	24.150	1.00	50.96	O
ATOM	11519	N	LYS	B	350	33.103	66.532	23.724	1.00	46.02	N
ATOM	11521	CA	LYS	B	350	32.610	65.465	22.881	1.00	46.35	C
ATOM	11523	CB	LYS	B	350	33.496	65.367	21.601	1.00	49.69	C
ATOM	11526	CG	LYS	B	350	33.014	64.434	20.402	1.00	58.03	C
ATOM	11529	CD	LYS	B	350	33.785	64.714	19.003	1.00	58.14	C
ATOM	11532	CE	LYS	B	350	33.246	63.860	17.760	1.00	60.61	C
ATOM	11535	NZ	LYS	B	350	33.683	64.245	16.314	1.00	56.11	N
ATOM	11539	C	LYS	B	350	32.554	64.164	23.717	1.00	44.86	C
ATOM	11540	O	LYS	B	350	32.810	63.100	23.206	1.00	48.76	O
ATOM	11541	N	ARG	B	351	32.200	64.257	25.007	1.00	44.60	N
ATOM	11543	CA	ARG	B	351	32.015	63.060	25.863	1.00	44.48	C
ATOM	11545	CB	ARG	B	351	33.225	62.846	26.743	1.00	43.82	C
ATOM	11548	CG	ARG	B	351	33.540	64.024	27.571	1.00	45.18	C
ATOM	11551	CD	ARG	B	351	34.789	63.898	28.392	1.00	40.95	C
ATOM	11554	NE	ARG	B	351	34.687	64.715	29.598	1.00	46.55	N
ATOM	11556	CZ	ARG	B	351	35.630	64.793	30.519	1.00	43.31	C
ATOM	11557	NH1	ARG	B	351	36.756	64.127	30.377	1.00	41.89	N
ATOM	11560	NH2	ARG	B	351	35.456	65.547	31.590	1.00	54.20	N
ATOM	11563	C	ARG	B	351	30.791	63.069	26.789	1.00	41.64	C
ATOM	11564	O	ARG	B	351	30.368	64.121	27.205	1.00	50.18	O
ATOM	11565	N	ILE	B	352	30.257	61.883	27.104	1.00	38.69	N
ATOM	11567	CA	ILE	B	352	29.130	61.673	28.027	1.00	45.01	C
ATOM	11569	CB	ILE	B	352	28.098	60.731	27.416	1.00	49.66	C
ATOM	11571	CG1	ILE	B	352	27.315	61.409	26.305	1.00	52.66	C
ATOM	11574	CD1	ILE	B	352	26.048	60.706	26.013	1.00	56.74	C
ATOM	11578	CG2	ILE	B	352	27.127	60.305	28.506	1.00	52.33	C
ATOM	11582	C	ILE	B	352	29.550	60.932	29.289	1.00	46.49	C
ATOM	11583	O	ILE	B	352	30.129	59.841	29.192	1.00	45.55	O
ATOM	11584	N	GLY	B	353	29.237	61.448	30.471	1.00	46.26	N
ATOM	11586	CA	GLY	B	353	29.635	60.734	31.670	1.00	44.22	C
ATOM	11589	C	GLY	B	353	28.530	60.101	32.472	1.00	40.63	C
ATOM	11590	O	GLY	B	353	27.454	60.641	32.543	1.00	50.25	O

ATOM	11591	N	PHE	B	354	28.815	58.960	33.096	1.00	41.57	N
ATOM	11593	CA	PHE	B	354	27.860	58.254	33.937	1.00	35.69	C
ATOM	11595	CB	PHE	B	354	27.614	56.866	33.365	1.00	42.54	C
ATOM	11598	CG	PHE	B	354	27.032	56.890	31.992	1.00	48.12	C
ATOM	11599	CD1	PHE	B	354	27.843	57.064	30.896	1.00	47.79	C
ATOM	11601	CE1	PHE	B	354	27.311	57.107	29.652	1.00	53.15	C
ATOM	11603	CZ	PHE	B	354	25.957	56.971	29.486	1.00	51.31	C
ATOM	11605	CE2	PHE	B	354	25.146	56.790	30.572	1.00	45.30	C
ATOM	11607	CD2	PHE	B	354	25.670	56.757	31.809	1.00	42.69	C
ATOM	11609	C	PHE	B	354	28.418	58.065	35.324	1.00	37.73	C
ATOM	11610	O	PHE	B	354	29.561	57.648	35.479	1.00	36.56	O
ATOM	11611	N	ALA	B	355	27.611	58.364	36.333	1.00	34.99	N
ATOM	11613	CA	ALA	B	355	27.973	58.081	37.695	1.00	31.85	C
ATOM	11615	CB	ALA	B	355	28.631	59.305	38.285	1.00	35.10	C
ATOM	11619	C	ALA	B	355	26.740	57.630	38.531	1.00	34.75	C
ATOM	11620	O	ALA	B	355	25.641	58.105	38.363	1.00	38.79	O
ATOM	11621	N	VAL	B	356	26.909	56.686	39.430	1.00	36.60	N
ATOM	11623	CA	VAL	B	356	25.801	56.261	40.272	1.00	35.07	C
ATOM	11625	CB	VAL	B	356	26.370	55.348	41.344	1.00	32.99	C
ATOM	11627	CG1	VAL	B	356	25.358	55.012	42.383	1.00	38.64	C
ATOM	11631	CG2	VAL	B	356	26.829	54.112	40.710	1.00	35.78	C
ATOM	11635	C	VAL	B	356	25.077	57.477	40.879	1.00	35.09	C
ATOM	11636	O	VAL	B	356	25.717	58.401	41.338	1.00	40.54	O
ATOM	11637	N	SER	B	357	23.752	57.483	40.905	1.00	41.74	N
ATOM	11639	CA	SER	B	357	22.999	58.670	41.346	1.00	41.57	C
ATOM	11641	CB	SER	B	357	21.721	58.803	40.523	1.00	47.83	C
ATOM	11644	OG	SER	B	357	21.001	60.008	40.844	1.00	50.14	O
ATOM	11646	C	SER	B	357	22.591	58.706	42.805	1.00	44.92	C
ATOM	11647	O	SER	B	357	22.032	57.767	43.335	1.00	49.30	O
ATOM	11648	N	ALA	B	358	22.822	59.824	43.458	1.00	47.90	N
ATOM	11650	CA	ALA	B	358	22.455	59.955	44.856	1.00	50.90	C
ATOM	11652	CB	ALA	B	358	22.871	61.301	45.346	1.00	52.95	C
ATOM	11656	C	ALA	B	358	20.962	59.764	45.155	1.00	51.41	C
ATOM	11657	O	ALA	B	358	20.538	59.955	46.293	1.00	50.45	O
ATOM	11658	N	CYS	B	359	20.158	59.408	44.167	1.00	51.99	N
ATOM	11660	CA	CYS	B	359	18.739	59.237	44.444	1.00	56.13	C
ATOM	11662	CB	CYS	B	359	17.928	60.518	44.118	1.00	57.03	C
ATOM	11665	SG	CYS	B	359	17.612	60.710	42.327	1.00	70.47	S
ATOM	11666	C	CYS	B	359	18.122	58.055	43.726	1.00	51.20	C
ATOM	11667	O	CYS	B	359	16.907	58.001	43.614	1.00	57.81	O
ATOM	11668	N	HIS	B	360	18.909	57.107	43.238	1.00	46.00	N
ATOM	11670	CA	HIS	B	360	18.286	55.955	42.602	1.00	46.33	C
ATOM	11672	CB	HIS	B	360	19.256	55.165	41.736	1.00	43.36	C
ATOM	11675	CG	HIS	B	360	20.215	54.331	42.501	1.00	38.68	C
ATOM	11676	ND1	HIS	B	360	21.398	54.828	42.996	1.00	40.71	N
ATOM	11678	CE1	HIS	B	360	22.052	53.864	43.613	1.00	38.06	C
ATOM	11680	NE2	HIS	B	360	21.334	52.758	43.535	1.00	40.34	N
ATOM	11682	CD2	HIS	B	360	20.178	53.030	42.847	1.00	39.93	C
ATOM	11684	C	HIS	B	360	17.608	55.028	43.604	1.00	47.19	C
ATOM	11685	O	HIS	B	360	18.049	54.855	44.722	1.00	49.29	O
ATOM	11686	N	VAL	B	361	16.521	54.430	43.157	1.00	49.14	N
ATOM	11688	CA	VAL	B	361	15.712	53.536	43.966	1.00	49.38	C
ATOM	11690	CB	VAL	B	361	14.359	53.315	43.229	1.00	48.93	C
ATOM	11692	CG1	VAL	B	361	13.659	52.119	43.747	1.00	50.27	C
ATOM	11696	CG2	VAL	B	361	13.474	54.527	43.327	1.00	49.22	C
ATOM	11700	C	VAL	B	361	16.427	52.201	44.061	1.00	48.86	C
ATOM	11701	O	VAL	B	361	16.805	51.659	43.055	1.00	50.03	O

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ATOM  11702  N   HIS B 362      16.636  51.656  45.235  1.00 50.40           N
ATOM  11704  CA  HIS B 362      17.322  50.373  45.323  1.00 54.92           C
ATOM  11706  CB  HIS B 362      18.864  50.539  45.254  1.00 54.49           C
ATOM  11709  CG  HIS B 362      19.377  51.443  46.321  1.00 60.33           C
ATOM  11710  ND1 HIS B 362      19.017  52.771  46.390  1.00 66.26           N
ATOM  11712  CE1 HIS B 362      19.596  53.328  47.442  1.00 65.09           C
ATOM  11714  NE2 HIS B 362      20.305  52.406  48.065  1.00 61.43           N
ATOM  11716  CD2 HIS B 362      20.174  51.216  47.389  1.00 61.57           C
ATOM  11718  C   HIS B 362      16.929  49.742  46.671  1.00 54.45           C
ATOM  11719  O   HIS B 362      16.069  50.242  47.362  1.00 53.82           O
ATOM  11720  N   ASP B 363      17.564  48.650  47.059  1.00 53.43           N
ATOM  11722  CA  ASP B 363      17.217  48.054  48.320  1.00 54.67           C
ATOM  11724  CB  ASP B 363      16.494  46.752  48.043  1.00 56.65           C
ATOM  11727  CG  ASP B 363      17.334  45.830  47.255  1.00 56.00           C
ATOM  11728  OD1 ASP B 363      18.346  45.373  47.833  1.00 60.63           O
ATOM  11729  OD2 ASP B 363      17.083  45.532  46.063  1.00 51.94           O
ATOM  11730  C   ASP B 363      18.443  47.756  49.171  1.00 55.74           C
ATOM  11731  O   ASP B 363      19.562  48.178  48.890  1.00 54.34           O
ATOM  11732  N   GLU B 364      18.180  46.998  50.216  1.00 54.75           N
ATOM  11734  CA  GLU B 364      19.153  46.627  51.197  1.00 58.19           C
ATOM  11736  CB  GLU B 364      18.486  45.696  52.252  1.00 66.95           C
ATOM  11739  CG  GLU B 364      17.379  44.737  51.746  1.00 73.62           C
ATOM  11742  CD  GLU B 364      15.939  45.284  51.760  1.00 79.77           C
ATOM  11743  OE1 GLU B 364      15.620  46.193  50.945  1.00 81.19           O
ATOM  11744  OE2 GLU B 364      15.110  44.780  52.581  1.00 79.52           O
ATOM  11745  C   GLU B 364      20.436  46.015  50.655  1.00 53.23           C
ATOM  11746  O   GLU B 364      21.497  46.365  51.142  1.00 62.76           O
ATOM  11747  N   PHE B 365      20.359  45.146  49.652  1.00 48.86           N
ATOM  11749  CA  PHE B 365      21.509  44.351  49.213  1.00 45.25           C
ATOM  11751  CB  PHE B 365      21.180  42.866  49.376  1.00 47.71           C
ATOM  11754  CG  PHE B 365      20.355  42.527  50.568  1.00 47.10           C
ATOM  11755  CD1 PHE B 365      19.002  42.462  50.470  1.00 48.77           C
ATOM  11757  CE1 PHE B 365      18.227  42.134  51.573  1.00 50.48           C
ATOM  11759  CZ  PHE B 365      18.807  41.860  52.769  1.00 50.39           C
ATOM  11761  CE2 PHE B 365      20.163  41.906  52.892  1.00 49.25           C
ATOM  11763  CD2 PHE B 365      20.941  42.236  51.784  1.00 52.57           C
ATOM  11765  C   PHE B 365      22.028  44.401  47.758  1.00 48.01           C
ATOM  11766  O   PHE B 365      22.790  43.488  47.355  1.00 48.65           O
ATOM  11767  N   ARG B 366      21.628  45.387  46.959  1.00 41.71           N
ATOM  11769  CA  ARG B 366      22.110  45.495  45.595  1.00 38.21           C
ATOM  11771  CB  ARG B 366      21.196  44.800  44.631  1.00 44.13           C
ATOM  11774  CG  ARG B 366      21.366  43.373  44.547  1.00 45.53           C
ATOM  11777  CD  ARG B 366      21.069  42.891  43.182  1.00 47.33           C
ATOM  11780  NE  ARG B 366      19.640  42.980  42.943  1.00 46.43           N
ATOM  11782  CZ  ARG B 366      18.989  42.079  42.253  1.00 48.01           C
ATOM  11783  NH1 ARG B 366      19.682  41.061  41.765  1.00 42.06           N
ATOM  11786  NH2 ARG B 366      17.671  42.188  42.048  1.00 48.96           N
ATOM  11789  C   ARG B 366      21.978  46.909  45.262  1.00 39.85           C
ATOM  11790  O   ARG B 366      21.091  47.555  45.778  1.00 43.10           O
ATOM  11791  N   THR B 367      22.812  47.388  44.353  1.00 43.90           N
ATOM  11793  CA  THR B 367      22.890  48.806  44.093  1.00 45.12           C
ATOM  11795  CB  THR B 367      23.905  49.378  45.030  1.00 48.16           C
ATOM  11797  OG1 THR B 367      23.712  50.781  45.171  1.00 51.47           O
ATOM  11799  CG2 THR B 367      25.310  49.228  44.422  1.00 49.76           C
ATOM  11803  C   THR B 367      23.342  49.094  42.705  1.00 44.62           C
ATOM  11804  O   THR B 367      24.218  48.423  42.196  1.00 54.55           O
ATOM  11805  N   ALA B 368      22.734  50.097  42.088  1.00 49.08           N
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ATOM	11807	CA	ALA	B	368	23.096	50.539	40.742	1.00	46.61	C
ATOM	11809	CB	ALA	B	368	22.408	51.789	40.479	1.00	48.60	C
ATOM	11813	C	ALA	B	368	24.589	50.768	40.715	1.00	47.51	C
ATOM	11814	O	ALA	B	368	25.131	51.084	41.752	1.00	54.43	O
ATOM	11815	N	ALA	B	369	25.248	50.662	39.561	1.00	46.20	N
ATOM	11817	CA	ALA	B	369	26.685	50.690	39.528	1.00	45.00	C
ATOM	11819	CB	ALA	B	369	27.158	49.328	40.018	1.00	47.24	C
ATOM	11823	C	ALA	B	369	27.496	51.050	38.249	1.00	44.87	C
ATOM	11824	O	ALA	B	369	27.161	50.643	37.116	1.00	48.30	O
ATOM	11825	N	VAL	B	370	28.620	51.759	38.447	1.00	42.20	N
ATOM	11827	CA	VAL	B	370	29.468	52.125	37.315	1.00	38.93	C
ATOM	11829	CB	VAL	B	370	29.495	53.628	37.014	1.00	36.63	C
ATOM	11831	CG1	VAL	B	370	30.429	53.873	35.921	1.00	41.13	C
ATOM	11835	CG2	VAL	B	370	28.134	54.161	36.602	1.00	37.20	C
ATOM	11839	C	VAL	B	370	30.838	51.685	37.636	1.00	38.61	C
ATOM	11840	O	VAL	B	370	31.420	52.204	38.525	1.00	38.62	O
ATOM	11841	N	GLU	B	371	31.390	50.748	36.885	1.00	43.13	N
ATOM	11843	CA	GLU	B	371	32.643	50.189	37.276	1.00	41.26	C
ATOM	11845	CB	GLU	B	371	32.358	48.778	37.822	1.00	43.99	C
ATOM	11848	CG	GLU	B	371	31.606	48.790	39.157	1.00	46.24	C
ATOM	11851	CD	GLU	B	371	31.166	47.419	39.677	1.00	51.18	C
ATOM	11852	OE1	GLU	B	371	31.380	47.199	40.880	1.00	54.14	O
ATOM	11853	OE2	GLU	B	371	30.602	46.566	38.927	1.00	53.22	O
ATOM	11854	C	GLU	B	371	33.499	50.071	36.085	1.00	43.69	C
ATOM	11855	O	GLU	B	371	32.935	49.921	35.040	1.00	40.57	O
ATOM	11856	N	GLY	B	372	34.842	50.169	36.240	1.00	49.03	N
ATOM	11858	CA	GLY	B	372	35.850	49.814	35.201	1.00	46.30	C
ATOM	11861	C	GLY	B	372	37.272	49.955	35.731	1.00	47.83	C
ATOM	11862	O	GLY	B	372	37.433	50.174	36.939	1.00	53.24	O
ATOM	11863	N	PRO	B	373	38.339	49.869	34.922	1.00	48.85	N
ATOM	11864	CA	PRO	B	373	38.364	49.535	33.488	1.00	47.06	C
ATOM	11866	CB	PRO	B	373	39.716	50.086	33.023	1.00	44.96	C
ATOM	11869	CG	PRO	B	373	40.533	49.940	34.115	1.00	43.41	C
ATOM	11872	CD	PRO	B	373	39.682	50.230	35.387	1.00	43.08	C
ATOM	11875	C	PRO	B	373	38.491	48.092	33.219	1.00	50.22	C
ATOM	11876	O	PRO	B	373	39.130	47.394	33.964	1.00	57.42	O
ATOM	11877	N	PHE	B	374	37.903	47.658	32.137	1.00	51.76	N
ATOM	11879	CA	PHE	B	374	38.030	46.319	31.713	1.00	53.93	C
ATOM	11881	CB	PHE	B	374	36.648	45.693	31.494	1.00	56.43	C
ATOM	11884	CG	PHE	B	374	35.736	45.873	32.661	1.00	53.63	C
ATOM	11885	CD1	PHE	B	374	35.069	47.063	32.842	1.00	54.53	C
ATOM	11887	CE1	PHE	B	374	34.249	47.242	33.904	1.00	56.48	C
ATOM	11889	CZ	PHE	B	374	34.093	46.226	34.821	1.00	57.87	C
ATOM	11891	CE2	PHE	B	374	34.758	45.038	34.654	1.00	50.55	C
ATOM	11893	CD2	PHE	B	374	35.572	44.865	33.579	1.00	49.47	C
ATOM	11895	C	PHE	B	374	38.736	46.536	30.420	1.00	59.86	C
ATOM	11896	O	PHE	B	374	38.433	47.466	29.694	1.00	62.61	O
ATOM	11897	N	VAL	B	375	39.692	45.677	30.129	1.00	68.35	N
ATOM	11899	CA	VAL	B	375	40.369	45.737	28.857	1.00	68.00	C
ATOM	11901	CB	VAL	B	375	41.765	45.125	28.921	1.00	69.56	C
ATOM	11903	CG1	VAL	B	375	42.126	44.497	27.585	1.00	72.03	C
ATOM	11907	CG2	VAL	B	375	42.774	46.194	29.334	1.00	71.07	C
ATOM	11911	C	VAL	B	375	39.508	45.050	27.808	1.00	72.55	C
ATOM	11912	O	VAL	B	375	39.061	43.915	27.984	1.00	64.78	O
ATOM	11913	N	THR	B	376	39.275	45.774	26.712	1.00	81.41	N
ATOM	11915	CA	THR	B	376	38.464	45.296	25.589	1.00	86.08	C
ATOM	11917	CB	THR	B	376	37.142	45.981	25.640	1.00	85.71	C

ATOM	11919	OG1	THR	B	376	36.993	46.575	26.932	1.00	88.06	O
ATOM	11921	CG2	THR	B	376	35.986	44.970	25.508	1.00	86.58	C
ATOM	11925	C	THR	B	376	39.130	45.590	24.246	1.00	90.80	C
ATOM	11926	O	THR	B	376	39.889	46.565	24.111	1.00	93.52	O
ATOM	11927	N	LEU	B	377	38.840	44.768	23.240	1.00	94.98	N
ATOM	11929	CA	LEU	B	377	39.572	44.884	21.974	1.00	97.54	C
ATOM	11931	CB	LEU	B	377	40.491	43.667	21.839	1.00	97.95	C
ATOM	11934	CG	LEU	B	377	41.234	43.239	23.119	1.00	97.10	C
ATOM	11936	CD1	LEU	B	377	42.302	42.213	22.767	1.00	96.01	C
ATOM	11940	CD2	LEU	B	377	41.873	44.413	23.852	1.00	96.18	C
ATOM	11944	C	LEU	B	377	38.777	45.053	20.662	1.00	98.30	C
ATOM	11945	O	LEU	B	377	37.719	44.425	20.470	1.00	95.52	O
ATOM	11946	N	ASP	B	378	39.328	45.909	19.782	1.00	97.57	N
ATOM	11948	CA	ASP	B	378	38.846	46.107	18.405	1.00	98.72	C
ATOM	11950	CB	ASP	B	378	38.818	44.778	17.631	1.00	101.77	C
ATOM	11953	CG	ASP	B	378	40.161	44.040	17.668	1.00	106.54	C
ATOM	11954	OD1	ASP	B	378	40.185	42.823	17.348	1.00	107.57	O
ATOM	11955	OD2	ASP	B	378	41.238	44.594	18.001	1.00	108.22	O
ATOM	11956	C	ASP	B	378	37.466	46.678	18.517	1.00	95.34	C
ATOM	11957	O	ASP	B	378	36.576	46.473	17.690	1.00	90.09	O
ATOM	11958	N	MET	B	379	37.315	47.427	19.584	1.00	92.72	N
ATOM	11960	CA	MET	B	379	36.018	47.850	19.970	1.00	89.67	C
ATOM	11962	CB	MET	B	379	36.115	48.778	21.181	1.00	87.84	C
ATOM	11965	CG	MET	B	379	36.814	48.131	22.363	1.00	85.16	C
ATOM	11968	SD	MET	B	379	36.294	48.757	23.944	1.00	81.06	S
ATOM	11969	CE	MET	B	379	37.408	49.948	24.177	1.00	82.73	C
ATOM	11973	C	MET	B	379	35.455	48.535	18.782	1.00	88.14	C
ATOM	11974	O	MET	B	379	34.453	48.097	18.241	1.00	89.91	O
ATOM	11975	N	GLU	B	380	36.133	49.590	18.349	1.00	89.97	N
ATOM	11977	CA	GLU	B	380	35.555	50.483	17.361	1.00	89.95	C
ATOM	11979	CB	GLU	B	380	36.642	51.168	16.508	1.00	89.88	C
ATOM	11982	CG	GLU	B	380	36.336	52.614	16.072	1.00	90.98	C
ATOM	11985	CD	GLU	B	380	34.854	52.999	16.089	1.00	88.44	C
ATOM	11986	OE1	GLU	B	380	34.530	54.085	16.634	1.00	82.43	O
ATOM	11987	OE2	GLU	B	380	34.021	52.227	15.552	1.00	85.64	O
ATOM	11988	C	GLU	B	380	34.529	49.668	16.547	1.00	90.22	C
ATOM	11989	O	GLU	B	380	33.385	50.102	16.385	1.00	89.91	O
ATOM	11990	N	ASP	B	381	34.946	48.482	16.080	1.00	89.23	N
ATOM	11992	CA	ASP	B	381	34.122	47.536	15.284	1.00	85.33	C
ATOM	11994	CB	ASP	B	381	34.705	46.142	15.374	1.00	86.39	C
ATOM	11997	CG	ASP	B	381	35.859	45.959	14.456	1.00	91.21	C
ATOM	11998	OD1	ASP	B	381	35.821	46.563	13.353	1.00	93.25	O
ATOM	11999	OD2	ASP	B	381	36.842	45.237	14.742	1.00	97.75	O
ATOM	12000	C	ASP	B	381	32.676	47.329	15.606	1.00	79.23	C
ATOM	12001	O	ASP	B	381	31.926	46.925	14.734	1.00	79.04	O
ATOM	12002	N	CYS	B	382	32.270	47.561	16.839	1.00	73.79	N
ATOM	12004	CA	CYS	B	382	30.891	47.324	17.189	1.00	72.63	C
ATOM	12006	CB	CYS	B	382	30.801	47.291	18.685	1.00	73.33	C
ATOM	12009	SG	CYS	B	382	32.081	46.160	19.287	1.00	72.63	S
ATOM	12010	C	CYS	B	382	30.101	48.438	16.574	1.00	70.89	C
ATOM	12011	O	CYS	B	382	28.891	48.364	16.388	1.00	71.67	O
ATOM	12012	N	GLY	B	383	30.838	49.484	16.246	1.00	72.45	N
ATOM	12014	CA	GLY	B	383	30.295	50.631	15.572	1.00	71.23	C
ATOM	12017	C	GLY	B	383	29.732	50.152	14.271	1.00	69.89	C
ATOM	12018	O	GLY	B	383	30.294	49.291	13.612	1.00	73.05	O
ATOM	12019	N	TYR	B	384	28.597	50.723	13.928	1.00	67.13	N
ATOM	12021	CA	TYR	B	384	27.915	50.436	12.714	1.00	64.11	C

ATOM	12023	CB	TYR	B	384	26.468	50.421	13.020	1.00	61.05	C
ATOM	12026	CG	TYR	B	384	25.620	50.091	11.867	1.00	59.89	C
ATOM	12027	CD1	TYR	B	384	25.280	48.777	11.578	1.00	59.47	C
ATOM	12029	CE1	TYR	B	384	24.476	48.469	10.515	1.00	61.28	C
ATOM	12031	CZ	TYR	B	384	23.997	49.497	9.733	1.00	62.97	C
ATOM	12032	OH	TYR	B	384	23.179	49.288	8.636	1.00	63.75	O
ATOM	12034	CE2	TYR	B	384	24.332	50.792	10.028	1.00	64.64	C
ATOM	12036	CD2	TYR	B	384	25.136	51.079	11.083	1.00	60.10	C
ATOM	12038	C	TYR	B	384	28.185	51.536	11.732	1.00	68.06	C
ATOM	12039	O	TYR	B	384	28.365	52.708	12.106	1.00	67.06	O
ATOM	12040	N	ASN	B	385	28.213	51.178	10.464	1.00	71.13	N
ATOM	12042	CA	ASN	B	385	28.501	52.166	9.438	1.00	74.74	C
ATOM	12044	CB	ASN	B	385	29.894	51.890	8.828	1.00	76.30	C
ATOM	12047	CG	ASN	B	385	31.057	51.931	9.889	1.00	78.44	C
ATOM	12048	OD1	ASN	B	385	30.989	52.640	10.887	1.00	84.85	O
ATOM	12049	ND2	ASN	B	385	32.111	51.163	9.646	1.00	76.88	N
ATOM	12052	C	ASN	B	385	27.362	52.205	8.374	1.00	79.12	C
ATOM	12053	O	ASN	B	385	27.234	51.384	7.455	1.00	79.49	O
ATOM	12054	OXT	ASN	B	385	26.445	53.064	8.344	1.00	79.45	O
ATOM	12055	N	SER	C	-2	53.798	42.195	56.398	1.00	54.33	N
ATOM	12057	CA	SER	C	-2	54.991	42.203	57.314	1.00	54.26	C
ATOM	12059	CB	SER	C	-2	54.496	42.894	58.620	1.00	59.81	C
ATOM	12062	OG	SER	C	-2	53.217	43.571	58.434	1.00	50.05	O
ATOM	12064	C	SER	C	-2	55.846	40.853	57.607	1.00	51.30	C
ATOM	12065	O	SER	C	-2	56.969	40.946	58.008	1.00	52.44	O
ATOM	12068	N	PHE	C	-1	55.366	39.626	57.416	1.00	49.50	N
ATOM	12070	CA	PHE	C	-1	56.183	38.439	57.772	1.00	45.08	C
ATOM	12072	CB	PHE	C	-1	55.401	37.604	58.777	1.00	45.10	C
ATOM	12075	CG	PHE	C	-1	54.686	38.446	59.773	1.00	43.74	C
ATOM	12076	CD1	PHE	C	-1	53.717	39.362	59.347	1.00	39.81	C
ATOM	12078	CE1	PHE	C	-1	53.068	40.151	60.248	1.00	44.62	C
ATOM	12080	CZ	PHE	C	-1	53.371	40.058	61.605	1.00	39.39	C
ATOM	12082	CE2	PHE	C	-1	54.336	39.149	62.031	1.00	45.60	C
ATOM	12084	CD2	PHE	C	-1	54.990	38.355	61.111	1.00	39.77	C
ATOM	12086	C	PHE	C	-1	56.784	37.524	56.676	1.00	47.59	C
ATOM	12087	O	PHE	C	-1	56.404	36.379	56.469	1.00	48.73	O
ATOM	12088	N	VAL	C	0	57.769	38.075	56.011	1.00	46.82	N
ATOM	12090	CA	VAL	C	0	58.543	37.462	54.968	1.00	42.56	C
ATOM	12092	CB	VAL	C	0	59.695	38.359	54.783	1.00	48.99	C
ATOM	12094	CG1	VAL	C	0	59.357	39.397	53.764	1.00	51.10	C
ATOM	12098	CG2	VAL	C	0	60.001	39.049	56.107	1.00	51.89	C
ATOM	12102	C	VAL	C	0	59.140	36.107	55.089	1.00	46.04	C
ATOM	12103	O	VAL	C	0	59.300	35.444	54.090	1.00	52.48	O
ATOM	12104	N	GLU	C	1	59.520	35.666	56.275	1.00	52.40	N
ATOM	12106	CA	GLU	C	1	60.053	34.310	56.418	1.00	48.09	C
ATOM	12108	CB	GLU	C	1	60.580	34.062	57.864	1.00	52.29	C
ATOM	12111	CG	GLU	C	1	61.892	33.262	57.999	1.00	57.28	C
ATOM	12114	CD	GLU	C	1	61.893	32.085	59.020	1.00	64.51	C
ATOM	12115	OE1	GLU	C	1	61.939	32.255	60.267	1.00	69.01	O
ATOM	12116	OE2	GLU	C	1	61.884	30.928	58.557	1.00	72.60	O
ATOM	12117	C	GLU	C	1	58.883	33.376	56.142	1.00	46.54	C
ATOM	12118	O	GLU	C	1	59.026	32.280	55.617	1.00	49.95	O
ATOM	12119	N	MET	C	2	57.696	33.827	56.493	1.00	49.04	N
ATOM	12121	CA	MET	C	2	56.532	32.945	56.564	1.00	49.74	C
ATOM	12123	CB	MET	C	2	55.626	33.430	57.694	1.00	48.27	C
ATOM	12126	CG	MET	C	2	56.231	33.224	59.038	1.00	45.70	C
ATOM	12129	SD	MET	C	2	55.044	33.016	60.326	1.00	51.30	S

ATOM	12130	CE	MET	C	2	54.993	34.710	60.885	1.00	55.15	C
ATOM	12134	C	MET	C	2	55.733	32.822	55.289	1.00	49.17	C
ATOM	12135	O	MET	C	2	55.047	31.832	55.051	1.00	53.00	O
ATOM	12136	N	VAL	C	3	55.829	33.826	54.453	1.00	48.17	N
ATOM	12138	CA	VAL	C	3	55.057	33.841	53.237	1.00	44.83	C
ATOM	12140	CB	VAL	C	3	55.288	35.185	52.611	1.00	44.77	C
ATOM	12142	CG1	VAL	C	3	55.076	35.148	51.174	1.00	49.34	C
ATOM	12146	CG2	VAL	C	3	54.379	36.181	53.266	1.00	47.06	C
ATOM	12150	C	VAL	C	3	55.391	32.689	52.296	1.00	42.19	C
ATOM	12151	O	VAL	C	3	56.538	32.338	52.136	1.00	44.06	O
ATOM	12152	N	ASP	C	4	54.375	32.108	51.668	1.00	45.69	N
ATOM	12154	CA	ASP	C	4	54.560	31.045	50.664	1.00	46.60	C
ATOM	12156	CB	ASP	C	4	55.500	31.467	49.499	1.00	49.07	C
ATOM	12159	CG	ASP	C	4	54.841	32.538	48.512	1.00	63.17	C
ATOM	12160	OD1	ASP	C	4	55.334	32.743	47.356	1.00	68.98	O
ATOM	12161	OD2	ASP	C	4	53.829	33.234	48.793	1.00	63.59	O
ATOM	12162	C	ASP	C	4	55.157	29.878	51.385	1.00	47.49	C
ATOM	12163	O	ASP	C	4	56.060	29.240	50.853	1.00	49.78	O
ATOM	12164	N	ASN	C	5	54.660	29.586	52.594	1.00	44.31	N
ATOM	12166	CA	ASN	C	5	55.266	28.538	53.398	1.00	36.68	C
ATOM	12168	CB	ASN	C	5	55.621	29.037	54.805	1.00	36.31	C
ATOM	12171	CG	ASN	C	5	54.437	29.178	55.738	1.00	40.22	C
ATOM	12172	OD1	ASN	C	5	53.318	29.476	55.339	1.00	47.05	O
ATOM	12173	ND2	ASN	C	5	54.694	28.960	57.017	1.00	41.17	N
ATOM	12176	C	ASN	C	5	54.452	27.285	53.431	1.00	41.07	C
ATOM	12177	O	ASN	C	5	54.800	26.347	54.177	1.00	38.77	O
ATOM	12178	N	LEU	C	6	53.389	27.284	52.615	1.00	40.12	N
ATOM	12180	CA	LEU	C	6	52.525	26.123	52.384	1.00	41.76	C
ATOM	12182	CB	LEU	C	6	51.101	26.491	52.744	1.00	42.43	C
ATOM	12185	CG	LEU	C	6	50.893	26.981	54.147	1.00	44.31	C
ATOM	12187	CD1	LEU	C	6	49.566	27.697	54.187	1.00	45.43	C
ATOM	12191	CD2	LEU	C	6	50.912	25.827	55.061	1.00	45.17	C
ATOM	12195	C	LEU	C	6	52.487	25.582	50.922	1.00	42.56	C
ATOM	12196	O	LEU	C	6	52.517	26.338	49.958	1.00	45.43	O
ATOM	12197	N	ARG	C	7	52.372	24.270	50.783	1.00	41.74	N
ATOM	12199	CA	ARG	C	7	52.291	23.598	49.484	1.00	46.94	C
ATOM	12201	CB	ARG	C	7	53.550	22.812	49.196	1.00	45.98	C
ATOM	12204	CG	ARG	C	7	54.688	23.617	48.729	1.00	52.89	C
ATOM	12207	CD	ARG	C	7	55.882	22.751	48.451	1.00	62.54	C
ATOM	12210	NE	ARG	C	7	56.264	21.967	49.632	1.00	72.96	N
ATOM	12212	CZ	ARG	C	7	57.069	20.891	49.617	1.00	78.99	C
ATOM	12213	NH1	ARG	C	7	57.600	20.433	48.481	1.00	78.58	N
ATOM	12216	NH2	ARG	C	7	57.346	20.266	50.751	1.00	78.67	N
ATOM	12219	C	ARG	C	7	51.138	22.617	49.483	1.00	44.60	C
ATOM	12220	O	ARG	C	7	50.627	22.304	50.529	1.00	50.99	O
ATOM	12221	N	GLY	C	8	50.752	22.119	48.312	1.00	50.43	N
ATOM	12223	CA	GLY	C	8	49.607	21.220	48.180	1.00	52.51	C
ATOM	12226	C	GLY	C	8	48.335	21.857	47.620	1.00	60.38	C
ATOM	12227	O	GLY	C	8	48.338	22.952	47.008	1.00	64.85	O
ATOM	12228	N	LYS	C	9	47.213	21.180	47.833	1.00	63.07	N
ATOM	12230	CA	LYS	C	9	45.965	21.642	47.255	1.00	64.03	C
ATOM	12232	CB	LYS	C	9	45.860	21.081	45.826	1.00	68.91	C
ATOM	12235	CG	LYS	C	9	46.401	19.663	45.630	1.00	71.59	C
ATOM	12238	CD	LYS	C	9	46.383	19.296	44.140	1.00	78.75	C
ATOM	12241	CE	LYS	C	9	46.052	17.793	43.893	1.00	82.33	C
ATOM	12244	NZ	LYS	C	9	46.104	17.357	42.454	1.00	80.13	N
ATOM	12248	C	LYS	C	9	44.696	21.313	48.068	1.00	63.52	C

ATOM	12249	O	LYS	C	9	44.734	20.619	49.076	1.00	66.42	O
ATOM	12250	N	SER	C	10	43.560	21.824	47.610	1.00	62.64	N
ATOM	12252	CA	SER	C	10	42.295	21.547	48.244	1.00	56.42	C
ATOM	12254	CB	SER	C	10	41.188	22.179	47.413	1.00	58.97	C
ATOM	12257	OG	SER	C	10	41.661	23.246	46.598	1.00	58.04	O
ATOM	12259	C	SER	C	10	42.115	20.024	48.308	1.00	59.45	C
ATOM	12260	O	SER	C	10	41.760	19.470	49.366	1.00	61.04	O
ATOM	12261	N	GLY	C	11	42.385	19.373	47.161	1.00	57.59	N
ATOM	12263	CA	GLY	C	11	42.230	17.938	46.946	1.00	52.60	C
ATOM	12266	C	GLY	C	11	42.837	17.013	47.974	1.00	50.69	C
ATOM	12267	O	GLY	C	11	42.155	16.131	48.456	1.00	47.76	O
ATOM	12268	N	GLN	C	12	44.111	17.214	48.304	1.00	51.44	N
ATOM	12270	CA	GLN	C	12	44.796	16.397	49.296	1.00	51.75	C
ATOM	12272	CB	GLN	C	12	45.904	15.638	48.615	1.00	51.49	C
ATOM	12275	CG	GLN	C	12	45.346	15.061	47.327	1.00	57.41	C
ATOM	12278	CD	GLN	C	12	46.330	14.266	46.496	1.00	62.60	C
ATOM	12279	OE1	GLN	C	12	47.536	14.564	46.471	1.00	67.40	O
ATOM	12280	NE2	GLN	C	12	45.816	13.255	45.798	1.00	64.74	N
ATOM	12283	C	GLN	C	12	45.284	17.244	50.466	1.00	51.33	C
ATOM	12284	O	GLN	C	12	45.770	16.759	51.487	1.00	53.08	O
ATOM	12285	N	GLY	C	13	45.147	18.538	50.320	1.00	50.28	N
ATOM	12287	CA	GLY	C	13	45.357	19.400	51.455	1.00	48.93	C
ATOM	12290	C	GLY	C	13	46.550	20.283	51.408	1.00	42.27	C
ATOM	12291	O	GLY	C	13	47.417	20.135	50.579	1.00	38.82	O
ATOM	12292	N	TYR	C	14	46.581	21.229	52.329	1.00	44.75	N
ATOM	12294	CA	TYR	C	14	47.763	22.054	52.493	1.00	42.35	C
ATOM	12296	CB	TYR	C	14	47.314	23.465	52.768	1.00	39.78	C
ATOM	12299	CG	TYR	C	14	46.558	23.964	51.576	1.00	40.40	C
ATOM	12300	CD1	TYR	C	14	45.196	23.694	51.430	1.00	41.19	C
ATOM	12302	CE1	TYR	C	14	44.482	24.133	50.330	1.00	37.98	C
ATOM	12304	CZ	TYR	C	14	45.138	24.850	49.355	1.00	51.75	C
ATOM	12305	OH	TYR	C	14	44.440	25.307	48.237	1.00	60.99	O
ATOM	12307	CE2	TYR	C	14	46.508	25.122	49.486	1.00	48.63	C
ATOM	12309	CD2	TYR	C	14	47.201	24.665	50.587	1.00	36.78	C
ATOM	12311	C	TYR	C	14	48.582	21.534	53.621	1.00	42.85	C
ATOM	12312	O	TYR	C	14	48.031	21.156	54.661	1.00	46.82	O
ATOM	12313	N	TYR	C	15	49.901	21.495	53.419	1.00	47.44	N
ATOM	12315	CA	TYR	C	15	50.864	21.109	54.484	1.00	40.77	C
ATOM	12317	CB	TYR	C	15	51.541	19.780	54.155	1.00	39.30	C
ATOM	12320	CG	TYR	C	15	52.293	19.646	52.807	1.00	35.74	C
ATOM	12321	CD1	TYR	C	15	53.646	19.867	52.722	1.00	36.76	C
ATOM	12323	CE1	TYR	C	15	54.335	19.731	51.545	1.00	33.20	C
ATOM	12325	CZ	TYR	C	15	53.703	19.360	50.429	1.00	37.91	C
ATOM	12326	OH	TYR	C	15	54.451	19.241	49.295	1.00	50.75	O
ATOM	12328	CE2	TYR	C	15	52.355	19.111	50.433	1.00	39.45	C
ATOM	12330	CD2	TYR	C	15	51.649	19.247	51.639	1.00	44.32	C
ATOM	12332	C	TYR	C	15	51.975	22.136	54.737	1.00	42.85	C
ATOM	12333	O	TYR	C	15	52.453	22.796	53.816	1.00	40.28	O
ATOM	12334	N	VAL	C	16	52.382	22.262	55.993	1.00	39.99	N
ATOM	12336	CA	VAL	C	16	53.542	23.061	56.317	1.00	40.96	C
ATOM	12338	CB	VAL	C	16	53.287	24.047	57.453	1.00	43.78	C
ATOM	12340	CG1	VAL	C	16	53.114	23.309	58.754	1.00	40.96	C
ATOM	12344	CG2	VAL	C	16	54.458	25.009	57.596	1.00	47.68	C
ATOM	12348	C	VAL	C	16	54.633	22.086	56.745	1.00	37.23	C
ATOM	12349	O	VAL	C	16	54.372	21.000	57.194	1.00	40.88	O
ATOM	12350	N	GLU	C	17	55.867	22.486	56.602	1.00	35.29	N
ATOM	12352	CA	GLU	C	17	56.982	21.642	56.919	1.00	35.79	C

ATOM	12354	CB	GLU	C	17	58.118	22.041	56.014	1.00	39.93	C
ATOM	12357	CG	GLU	C	17	59.452	21.517	56.451	1.00	47.15	C
ATOM	12360	CD	GLU	C	17	60.541	21.922	55.490	1.00	52.60	C
ATOM	12361	OE1	GLU	C	17	60.212	22.301	54.325	1.00	57.45	O
ATOM	12362	OE2	GLU	C	17	61.710	21.869	55.920	1.00	52.23	O
ATOM	12363	C	GLU	C	17	57.372	21.875	58.349	1.00	34.51	C
ATOM	12364	O	GLU	C	17	57.460	23.030	58.756	1.00	45.63	O
ATOM	12365	N	MET	C	18	57.592	20.818	59.130	1.00	33.60	N
ATOM	12367	CA	MET	C	18	57.970	20.988	60.539	1.00	39.59	C
ATOM	12369	CB	MET	C	18	56.772	20.810	61.479	1.00	40.20	C
ATOM	12372	CG	MET	C	18	55.481	21.510	61.062	1.00	40.31	C
ATOM	12375	SD	MET	C	18	54.035	21.028	62.062	1.00	49.53	S
ATOM	12376	CE	MET	C	18	54.480	21.689	63.652	1.00	40.70	C
ATOM	12380	C	MET	C	18	59.081	19.985	60.893	1.00	45.22	C
ATOM	12381	O	MET	C	18	59.490	19.197	60.024	1.00	48.94	O
ATOM	12382	N	THR	C	19	59.573	20.023	62.141	1.00	44.96	N
ATOM	12384	CA	THR	C	19	60.580	19.059	62.632	1.00	45.77	C
ATOM	12386	CB	THR	C	19	62.016	19.637	62.592	1.00	45.75	C
ATOM	12388	OG1	THR	C	19	62.205	20.560	63.672	1.00	45.68	O
ATOM	12390	CG2	THR	C	19	62.279	20.440	61.365	1.00	47.54	C
ATOM	12394	C	THR	C	19	60.360	18.645	64.085	1.00	46.35	C
ATOM	12395	O	THR	C	19	60.282	19.493	64.943	1.00	51.49	O
ATOM	12396	N	VAL	C	20	60.291	17.353	64.370	1.00	46.60	N
ATOM	12398	CA	VAL	C	20	60.207	16.880	65.747	1.00	46.13	C
ATOM	12400	CB	VAL	C	20	59.138	15.840	65.906	1.00	49.43	C
ATOM	12402	CG1	VAL	C	20	57.730	16.382	65.578	1.00	55.74	C
ATOM	12406	CG2	VAL	C	20	59.430	14.713	64.993	1.00	52.81	C
ATOM	12410	C	VAL	C	20	61.507	16.160	66.163	1.00	48.31	C
ATOM	12411	O	VAL	C	20	62.179	15.526	65.337	1.00	40.37	O
ATOM	12412	N	GLY	C	21	61.860	16.263	67.445	1.00	47.24	N
ATOM	12414	CA	GLY	C	21	62.935	15.466	68.008	1.00	44.07	C
ATOM	12417	C	GLY	C	21	64.315	16.030	67.964	1.00	48.42	C
ATOM	12418	O	GLY	C	21	64.512	17.180	67.577	1.00	54.75	O
ATOM	12419	N	SER	C	22	65.294	15.215	68.358	1.00	46.60	N
ATOM	12421	CA	SER	C	22	66.649	15.685	68.411	1.00	44.93	C
ATOM	12423	CB	SER	C	22	66.925	16.240	69.813	1.00	46.66	C
ATOM	12426	OG	SER	C	22	65.736	16.738	70.428	1.00	51.42	O
ATOM	12428	C	SER	C	22	67.639	14.580	68.113	1.00	47.58	C
ATOM	12429	O	SER	C	22	67.657	13.570	68.805	1.00	57.41	O
ATOM	12430	N	PRO	C	23	68.450	14.740	67.076	1.00	43.72	N
ATOM	12431	CA	PRO	C	23	68.345	15.844	66.127	1.00	46.60	C
ATOM	12433	CB	PRO	C	23	69.475	15.527	65.140	1.00	44.76	C
ATOM	12436	CG	PRO	C	23	69.592	14.109	65.254	1.00	41.34	C
ATOM	12439	CD	PRO	C	23	69.568	13.881	66.732	1.00	38.07	C
ATOM	12442	C	PRO	C	23	67.003	15.754	65.433	1.00	44.72	C
ATOM	12443	O	PRO	C	23	66.338	14.767	65.601	1.00	49.06	O
ATOM	12444	N	PRO	C	24	66.640	16.763	64.661	1.00	50.13	N
ATOM	12445	CA	PRO	C	24	65.314	16.882	64.016	1.00	45.48	C
ATOM	12447	CB	PRO	C	24	65.324	18.328	63.526	1.00	50.03	C
ATOM	12450	CG	PRO	C	24	66.494	19.014	64.223	1.00	50.43	C
ATOM	12453	CD	PRO	C	24	67.515	17.933	64.408	1.00	46.95	C
ATOM	12456	C	PRO	C	24	64.902	16.046	62.798	1.00	47.53	C
ATOM	12457	O	PRO	C	24	65.687	15.938	61.873	1.00	48.93	O
ATOM	12458	N	GLN	C	25	63.661	15.568	62.799	1.00	50.98	N
ATOM	12460	CA	GLN	C	25	63.096	14.893	61.663	1.00	49.33	C
ATOM	12462	CB	GLN	C	25	62.395	13.625	62.149	1.00	53.14	C
ATOM	12465	CG	GLN	C	25	63.395	12.605	62.669	1.00	48.07	C

ATOM	12468	CD	GLN	C	25	62.765	11.501	63.465	1.00	52.67	C
ATOM	12469	OE1	GLN	C	25	61.814	10.862	63.017	1.00	63.47	O
ATOM	12470	NE2	GLN	C	25	63.303	11.255	64.648	1.00	46.81	N
ATOM	12473	C	GLN	C	25	62.148	15.776	60.845	1.00	51.50	C
ATOM	12474	O	GLN	C	25	61.039	16.151	61.274	1.00	46.44	O
ATOM	12475	N	THR	C	26	62.595	16.092	59.643	1.00	49.81	N
ATOM	12477	CA	THR	C	26	61.754	16.827	58.751	1.00	51.29	C
ATOM	12479	CB	THR	C	26	62.462	17.098	57.429	1.00	53.77	C
ATOM	12481	OG1	THR	C	26	63.759	17.659	57.673	1.00	53.98	O
ATOM	12483	CG2	THR	C	26	61.709	18.172	56.629	1.00	52.68	C
ATOM	12487	C	THR	C	26	60.555	15.969	58.478	1.00	51.30	C
ATOM	12488	O	THR	C	26	60.666	14.771	58.226	1.00	51.90	O
ATOM	12489	N	LEU	C	27	59.396	16.594	58.530	1.00	50.70	N
ATOM	12491	CA	LEU	C	27	58.174	15.933	58.155	1.00	43.30	C
ATOM	12493	CB	LEU	C	27	57.478	15.409	59.378	1.00	44.64	C
ATOM	12496	CG	LEU	C	27	58.218	14.449	60.281	1.00	45.47	C
ATOM	12498	CD1	LEU	C	27	57.624	14.540	61.675	1.00	45.75	C
ATOM	12502	CD2	LEU	C	27	58.122	13.034	59.686	1.00	44.30	C
ATOM	12506	C	LEU	C	27	57.323	17.006	57.577	1.00	39.69	C
ATOM	12507	O	LEU	C	27	57.495	18.143	57.925	1.00	43.38	O
ATOM	12508	N	ASN	C	28	56.412	16.652	56.695	1.00	42.74	N
ATOM	12510	CA	ASN	C	28	55.433	17.586	56.185	1.00	41.37	C
ATOM	12512	CB	ASN	C	28	55.194	17.347	54.703	1.00	42.25	C
ATOM	12515	CG	ASN	C	28	56.215	18.014	53.828	1.00	41.51	C
ATOM	12516	OD1	ASN	C	28	56.417	17.614	52.679	1.00	48.06	O
ATOM	12517	ND2	ASN	C	28	56.870	19.034	54.355	1.00	48.36	N
ATOM	12520	C	ASN	C	28	54.144	17.326	56.948	1.00	42.07	C
ATOM	12521	O	ASN	C	28	53.796	16.175	57.196	1.00	42.00	O
ATOM	12522	N	ILE	C	29	53.429	18.388	57.303	1.00	41.25	N
ATOM	12524	CA	ILE	C	29	52.254	18.282	58.144	1.00	38.11	C
ATOM	12526	CB	ILE	C	29	52.581	18.909	59.452	1.00	37.30	C
ATOM	12528	CG1	ILE	C	29	53.888	18.345	60.002	1.00	37.82	C
ATOM	12531	CD1	ILE	C	29	53.764	16.947	60.383	1.00	37.89	C
ATOM	12535	CG2	ILE	C	29	51.428	18.758	60.382	1.00	37.26	C
ATOM	12539	C	ILE	C	29	51.111	19.100	57.605	1.00	41.88	C
ATOM	12540	O	ILE	C	29	51.317	20.272	57.335	1.00	44.35	O
ATOM	12541	N	LEU	C	30	49.924	18.485	57.471	1.00	41.50	N
ATOM	12543	CA	LEU	C	30	48.669	19.159	57.062	1.00	40.03	C
ATOM	12545	CB	LEU	C	30	47.609	18.121	56.699	1.00	36.38	C
ATOM	12548	CG	LEU	C	30	46.175	18.515	56.462	1.00	43.90	C
ATOM	12550	CD1	LEU	C	30	45.650	17.851	55.272	1.00	48.94	C
ATOM	12554	CD2	LEU	C	30	45.293	18.120	57.618	1.00	49.66	C
ATOM	12558	C	LEU	C	30	48.071	20.130	58.085	1.00	41.43	C
ATOM	12559	O	LEU	C	30	47.961	19.834	59.261	1.00	44.99	O
ATOM	12560	N	VAL	C	31	47.656	21.300	57.607	1.00	44.35	N
ATOM	12562	CA	VAL	C	31	47.080	22.312	58.460	1.00	40.92	C
ATOM	12564	CB	VAL	C	31	47.300	23.638	57.892	1.00	37.95	C
ATOM	12566	CG1	VAL	C	31	46.317	24.595	58.524	1.00	41.29	C
ATOM	12570	CG2	VAL	C	31	48.718	24.068	58.132	1.00	41.26	C
ATOM	12574	C	VAL	C	31	45.574	22.155	58.515	1.00	45.40	C
ATOM	12575	O	VAL	C	31	44.885	22.495	57.555	1.00	46.26	O
ATOM	12576	N	ASP	C	32	45.082	21.674	59.658	1.00	44.37	N
ATOM	12578	CA	ASP	C	32	43.693	21.316	59.849	1.00	42.08	C
ATOM	12580	CB	ASP	C	32	43.648	19.799	60.070	1.00	48.54	C
ATOM	12583	CG	ASP	C	32	42.270	19.279	60.373	1.00	55.02	C
ATOM	12584	OD1	ASP	C	32	41.331	19.695	59.667	1.00	57.45	O
ATOM	12585	OD2	ASP	C	32	42.035	18.443	61.298	1.00	54.56	O

ATOM	12586	C	ASP	C	32	42.996	22.030	60.996	1.00	42.96	C
ATOM	12587	O	ASP	C	32	43.171	21.653	62.148	1.00	38.86	O
ATOM	12588	N	THR	C	33	42.205	23.072	60.670	1.00	42.49	N
ATOM	12590	CA	THR	C	33	41.382	23.757	61.655	1.00	34.59	C
ATOM	12592	CB	THR	C	33	41.102	25.275	61.297	1.00	40.43	C
ATOM	12594	OG1	THR	C	33	40.271	25.418	60.128	1.00	36.06	O
ATOM	12596	CG2	THR	C	33	42.332	26.064	60.943	1.00	38.42	C
ATOM	12600	C	THR	C	33	40.025	23.151	61.903	1.00	37.84	C
ATOM	12601	O	THR	C	33	39.181	23.773	62.562	1.00	42.84	O
ATOM	12602	N	GLY	C	34	39.792	21.985	61.347	1.00	39.71	N
ATOM	12604	CA	GLY	C	34	38.621	21.204	61.713	1.00	45.14	C
ATOM	12607	C	GLY	C	34	38.955	20.018	62.634	1.00	44.20	C
ATOM	12608	O	GLY	C	34	38.190	19.062	62.710	1.00	44.56	O
ATOM	12609	N	SER	C	35	40.102	20.086	63.318	1.00	39.94	N
ATOM	12611	CA	SER	C	35	40.490	19.124	64.357	1.00	36.97	C
ATOM	12613	CB	SER	C	35	41.195	17.909	63.768	1.00	41.17	C
ATOM	12616	OG	SER	C	35	42.575	18.109	63.530	1.00	39.49	O
ATOM	12618	C	SER	C	35	41.423	19.799	65.385	1.00	41.65	C
ATOM	12619	O	SER	C	35	41.747	20.986	65.259	1.00	38.82	O
ATOM	12620	N	SER	C	36	41.881	19.044	66.384	1.00	41.66	N
ATOM	12622	CA	SER	C	36	42.683	19.621	67.476	1.00	36.97	C
ATOM	12624	CB	SER	C	36	41.755	19.879	68.673	1.00	39.49	C
ATOM	12627	OG	SER	C	36	40.776	20.894	68.393	1.00	34.74	O
ATOM	12629	C	SER	C	36	43.908	18.814	67.975	1.00	40.18	C
ATOM	12630	O	SER	C	36	44.478	19.169	69.000	1.00	46.46	O
ATOM	12631	N	ASN	C	37	44.322	17.742	67.298	1.00	34.55	N
ATOM	12633	CA	ASN	C	37	45.511	17.024	67.723	1.00	36.25	C
ATOM	12635	CB	ASN	C	37	45.259	15.525	67.766	1.00	38.28	C
ATOM	12638	CG	ASN	C	37	44.338	15.132	68.855	1.00	39.72	C
ATOM	12639	OD1	ASN	C	37	43.120	15.086	68.681	1.00	38.23	O
ATOM	12640	ND2	ASN	C	37	44.911	14.815	69.992	1.00	37.80	N
ATOM	12643	C	ASN	C	37	46.674	17.175	66.771	1.00	37.54	C
ATOM	12644	O	ASN	C	37	46.475	17.306	65.578	1.00	34.71	O
ATOM	12645	N	PHE	C	38	47.888	17.150	67.322	1.00	35.88	N
ATOM	12647	CA	PHE	C	38	49.090	17.051	66.525	1.00	33.22	C
ATOM	12649	CB	PHE	C	38	50.203	17.902	67.126	1.00	31.39	C
ATOM	12652	CG	PHE	C	38	51.541	17.943	66.303	1.00	37.60	C
ATOM	12653	CD1	PHE	C	38	52.748	18.100	66.931	1.00	37.64	C
ATOM	12655	CE1	PHE	C	38	53.864	18.133	66.256	1.00	42.48	C
ATOM	12657	CZ	PHE	C	38	53.869	18.028	64.938	1.00	41.33	C
ATOM	12659	CE2	PHE	C	38	52.742	17.885	64.307	1.00	43.17	C
ATOM	12661	CD2	PHE	C	38	51.573	17.844	64.979	1.00	38.57	C
ATOM	12663	C	PHE	C	38	49.361	15.548	66.531	1.00	31.89	C
ATOM	12664	O	PHE	C	38	49.328	14.912	67.596	1.00	30.08	O
ATOM	12665	N	ALA	C	39	49.584	14.984	65.337	1.00	35.67	N
ATOM	12667	CA	ALA	C	39	49.777	13.542	65.135	1.00	35.28	C
ATOM	12669	CB	ALA	C	39	48.450	12.917	65.095	1.00	37.14	C
ATOM	12673	C	ALA	C	39	50.557	13.217	63.833	1.00	41.38	C
ATOM	12674	O	ALA	C	39	50.252	13.780	62.781	1.00	47.14	O
ATOM	12675	N	VAL	C	40	51.556	12.330	63.900	1.00	44.87	N
ATOM	12677	CA	VAL	C	40	52.402	11.999	62.744	1.00	46.80	C
ATOM	12679	CB	VAL	C	40	53.865	12.384	62.950	1.00	51.51	C
ATOM	12681	CG1	VAL	C	40	54.002	13.840	63.101	1.00	54.58	C
ATOM	12685	CG2	VAL	C	40	54.444	11.672	64.169	1.00	57.23	C
ATOM	12689	C	VAL	C	40	52.504	10.524	62.628	1.00	44.81	C
ATOM	12690	O	VAL	C	40	52.333	9.858	63.627	1.00	47.35	O
ATOM	12691	N	GLY	C	41	52.796	10.017	61.429	1.00	42.10	N

ATOM	12693	CA	GLY	C	41	53.024	8.600	61.217	1.00	36.51	C
ATOM	12696	C	GLY	C	41	54.331	8.220	61.900	1.00	45.89	C
ATOM	12697	O	GLY	C	41	55.312	8.941	61.803	1.00	41.98	O
ATOM	12698	N	ALA	C	42	54.368	7.083	62.591	1.00	49.43	N
ATOM	12700	CA	ALA	C	42	55.588	6.687	63.291	1.00	46.63	C
ATOM	12702	CB	ALA	C	42	55.434	6.999	64.733	1.00	44.75	C
ATOM	12706	C	ALA	C	42	55.868	5.196	63.096	1.00	50.91	C
ATOM	12707	O	ALA	C	42	56.415	4.512	63.968	1.00	56.15	O
ATOM	12708	N	ALA	C	43	55.494	4.714	61.923	1.00	51.91	N
ATOM	12710	CA	ALA	C	43	55.530	3.302	61.647	1.00	55.01	C
ATOM	12712	CB	ALA	C	43	54.578	2.588	62.522	1.00	56.93	C
ATOM	12716	C	ALA	C	43	55.118	3.057	60.232	1.00	59.43	C
ATOM	12717	O	ALA	C	43	54.070	3.538	59.772	1.00	58.38	O
ATOM	12718	N	PRO	C	44	55.971	2.315	59.555	1.00	59.53	N
ATOM	12719	CA	PRO	C	44	55.738	1.800	58.207	1.00	57.91	C
ATOM	12721	CB	PRO	C	44	56.185	0.392	58.373	1.00	58.24	C
ATOM	12724	CG	PRO	C	44	57.450	0.628	59.193	1.00	60.25	C
ATOM	12727	CD	PRO	C	44	57.296	1.930	60.015	1.00	59.83	C
ATOM	12730	C	PRO	C	44	54.345	1.869	57.679	1.00	51.08	C
ATOM	12731	O	PRO	C	44	53.427	1.440	58.331	1.00	42.11	O
ATOM	12732	N	HIS	C	45	54.228	2.439	56.483	1.00	51.18	N
ATOM	12734	CA	HIS	C	45	52.943	2.516	55.767	1.00	51.14	C
ATOM	12736	CB	HIS	C	45	51.987	3.544	56.361	1.00	49.59	C
ATOM	12739	CG	HIS	C	45	50.664	3.623	55.641	1.00	55.41	C
ATOM	12740	ND1	HIS	C	45	50.552	4.007	54.318	1.00	50.15	N
ATOM	12742	CE1	HIS	C	45	49.280	3.983	53.961	1.00	48.42	C
ATOM	12744	NE2	HIS	C	45	48.563	3.582	54.993	1.00	48.32	N
ATOM	12746	CD2	HIS	C	45	49.401	3.351	56.058	1.00	50.46	C
ATOM	12748	C	HIS	C	45	53.171	2.803	54.287	1.00	51.98	C
ATOM	12749	O	HIS	C	45	53.986	3.610	53.912	1.00	58.52	O
ATOM	12750	N	PRO	C	46	52.430	2.123	53.444	1.00	59.22	N
ATOM	12751	CA	PRO	C	46	52.535	2.244	51.977	1.00	58.93	C
ATOM	12753	CB	PRO	C	46	51.381	1.382	51.492	1.00	60.36	C
ATOM	12756	CG	PRO	C	46	51.169	0.420	52.553	1.00	62.16	C
ATOM	12759	CD	PRO	C	46	51.412	1.141	53.851	1.00	58.40	C
ATOM	12762	C	PRO	C	46	52.263	3.601	51.375	1.00	60.75	C
ATOM	12763	O	PRO	C	46	52.429	3.742	50.152	1.00	66.57	O
ATOM	12764	N	PHE	C	47	51.820	4.582	52.146	1.00	53.51	N
ATOM	12766	CA	PHE	C	47	51.687	5.885	51.534	1.00	54.37	C
ATOM	12768	CB	PHE	C	47	50.227	6.362	51.593	1.00	55.83	C
ATOM	12771	CG	PHE	C	47	49.248	5.477	50.798	1.00	56.85	C
ATOM	12772	CD1	PHE	C	47	47.889	5.498	51.069	1.00	53.21	C
ATOM	12774	CE1	PHE	C	47	47.022	4.712	50.358	1.00	58.68	C
ATOM	12776	CZ	PHE	C	47	47.494	3.872	49.346	1.00	53.11	C
ATOM	12778	CE2	PHE	C	47	48.802	3.834	49.068	1.00	53.10	C
ATOM	12780	CD2	PHE	C	47	49.693	4.630	49.784	1.00	59.43	C
ATOM	12782	C	PHE	C	47	52.728	6.896	52.106	1.00	53.35	C
ATOM	12783	O	PHE	C	47	52.739	8.075	51.708	1.00	47.38	O
ATOM	12784	N	LEU	C	48	53.602	6.407	52.998	1.00	47.46	N
ATOM	12786	CA	LEU	C	48	54.627	7.217	53.677	1.00	48.00	C
ATOM	12788	CB	LEU	C	48	54.585	6.868	55.163	1.00	44.63	C
ATOM	12791	CG	LEU	C	48	53.203	7.093	55.770	1.00	36.89	C
ATOM	12793	CD1	LEU	C	48	53.226	7.095	57.269	1.00	32.35	C
ATOM	12797	CD2	LEU	C	48	52.716	8.414	55.326	1.00	43.78	C
ATOM	12801	C	LEU	C	48	56.055	7.010	53.206	1.00	49.23	C
ATOM	12802	O	LEU	C	48	56.512	5.888	53.245	1.00	51.31	O
ATOM	12803	N	HIS	C	49	56.741	8.082	52.772	1.00	54.74	N

ATOM	12805	CA	HIS	C	49	58.138	8.036	52.290	1.00	55.16	C
ATOM	12807	CB	HIS	C	49	58.563	9.276	51.513	1.00	62.74	C
ATOM	12810	CG	HIS	C	49	57.851	9.479	50.216	1.00	80.32	C
ATOM	12811	ND1	HIS	C	49	57.953	8.596	49.157	1.00	90.23	N
ATOM	12813	CE1	HIS	C	49	57.221	9.041	48.148	1.00	90.85	C
ATOM	12815	NE2	HIS	C	49	56.653	10.180	48.512	1.00	88.40	N
ATOM	12817	CD2	HIS	C	49	57.032	10.477	49.799	1.00	85.66	C
ATOM	12819	C	HIS	C	49	58.985	8.110	53.491	1.00	52.56	C
ATOM	12820	O	HIS	C	49	60.083	7.550	53.529	1.00	57.27	O
ATOM	12821	N	ARG	C	50	58.495	8.859	54.472	1.00	46.86	N
ATOM	12823	CA	ARG	C	50	59.152	8.928	55.749	1.00	44.15	C
ATOM	12825	CB	ARG	C	50	60.123	10.094	55.776	1.00	47.15	C
ATOM	12828	CG	ARG	C	50	59.543	11.362	55.346	1.00	48.57	C
ATOM	12831	CD	ARG	C	50	60.498	12.504	55.358	1.00	47.15	C
ATOM	12834	NE	ARG	C	50	59.733	13.667	54.935	1.00	57.92	N
ATOM	12836	CZ	ARG	C	50	60.210	14.894	54.724	1.00	57.78	C
ATOM	12837	NH1	ARG	C	50	61.491	15.192	54.882	1.00	51.00	N
ATOM	12840	NH2	ARG	C	50	59.366	15.835	54.342	1.00	59.97	N
ATOM	12843	C	ARG	C	50	58.192	9.000	56.918	1.00	40.60	C
ATOM	12844	O	ARG	C	50	56.992	9.149	56.762	1.00	38.05	O
ATOM	12845	N	TYR	C	51	58.746	8.873	58.107	1.00	43.42	N
ATOM	12847	CA	TYR	C	51	57.961	8.988	59.304	1.00	46.93	C
ATOM	12849	CB	TYR	C	51	57.068	7.774	59.414	1.00	48.86	C
ATOM	12852	CG	TYR	C	51	57.838	6.503	59.490	1.00	57.25	C
ATOM	12853	CD1	TYR	C	51	58.167	5.944	60.706	1.00	59.52	C
ATOM	12855	CE1	TYR	C	51	58.876	4.753	60.768	1.00	64.00	C
ATOM	12857	CZ	TYR	C	51	59.260	4.118	59.593	1.00	65.22	C
ATOM	12858	OH	TYR	C	51	59.966	2.928	59.626	1.00	68.18	O
ATOM	12860	CE2	TYR	C	51	58.939	4.662	58.380	1.00	61.62	C
ATOM	12862	CD2	TYR	C	51	58.236	5.844	58.331	1.00	62.51	C
ATOM	12864	C	TYR	C	51	58.822	9.143	60.563	1.00	40.91	C
ATOM	12865	O	TYR	C	51	59.999	8.948	60.522	1.00	42.94	O
ATOM	12866	N	TYR	C	52	58.190	9.503	61.674	1.00	40.91	N
ATOM	12868	CA	TYR	C	52	58.832	9.726	62.976	1.00	40.27	C
ATOM	12870	CB	TYR	C	52	57.747	10.233	63.886	1.00	41.76	C
ATOM	12873	CG	TYR	C	52	58.122	10.764	65.232	1.00	41.11	C
ATOM	12874	CD1	TYR	C	52	59.174	11.588	65.399	1.00	47.30	C
ATOM	12876	CE1	TYR	C	52	59.492	12.084	66.637	1.00	50.41	C
ATOM	12878	CZ	TYR	C	52	58.750	11.768	67.719	1.00	49.29	C
ATOM	12879	OH	TYR	C	52	59.121	12.304	68.943	1.00	53.62	O
ATOM	12881	CE2	TYR	C	52	57.685	10.943	67.579	1.00	46.11	C
ATOM	12883	CD2	TYR	C	52	57.377	10.449	66.340	1.00	46.35	C
ATOM	12885	C	TYR	C	52	59.394	8.525	63.684	1.00	41.56	C
ATOM	12886	O	TYR	C	52	58.631	7.656	64.087	1.00	42.35	O
ATOM	12887	N	GLN	C	53	60.711	8.500	63.860	1.00	44.45	N
ATOM	12889	CA	GLN	C	53	61.404	7.421	64.534	1.00	41.54	C
ATOM	12891	CB	GLN	C	53	62.681	7.086	63.790	1.00	44.38	C
ATOM	12894	CG	GLN	C	53	62.440	6.932	62.289	1.00	51.42	C
ATOM	12897	CD	GLN	C	53	63.227	5.794	61.672	1.00	59.82	C
ATOM	12898	OE1	GLN	C	53	63.842	5.956	60.617	1.00	61.98	O
ATOM	12899	NE2	GLN	C	53	63.204	4.638	62.321	1.00	67.41	N
ATOM	12902	C	GLN	C	53	61.698	7.905	65.919	1.00	39.42	C
ATOM	12903	O	GLN	C	53	62.595	8.716	66.122	1.00	53.39	O
ATOM	12904	N	ARG	C	54	60.926	7.410	66.862	1.00	38.63	N
ATOM	12906	CA	ARG	C	54	61.004	7.780	68.276	1.00	42.43	C
ATOM	12908	CB	ARG	C	54	59.828	7.175	69.000	1.00	39.75	C
ATOM	12911	CG	ARG	C	54	58.574	8.077	68.924	1.00	40.81	C

ATOM	12914	CD	ARG	C	54	57.389	7.431	69.538	1.00	39.95	C
ATOM	12917	NE	ARG	C	54	57.137	6.168	68.844	1.00	40.64	N
ATOM	12919	CZ	ARG	C	54	56.124	5.372	69.092	1.00	45.54	C
ATOM	12920	NH1	ARG	C	54	55.230	5.686	70.027	1.00	47.14	N
ATOM	12923	NH2	ARG	C	54	56.000	4.257	68.396	1.00	48.98	N
ATOM	12926	C	ARG	C	54	62.219	7.302	69.005	1.00	47.24	C
ATOM	12927	O	ARG	C	54	62.621	7.870	70.013	1.00	49.66	O
ATOM	12928	N	GLN	C	55	62.795	6.236	68.482	1.00	55.23	N
ATOM	12930	CA	GLN	C	55	63.960	5.624	69.061	1.00	55.09	C
ATOM	12932	CB	GLN	C	55	64.162	4.277	68.388	1.00	60.40	C
ATOM	12935	CG	GLN	C	55	64.836	4.423	67.025	1.00	62.46	C
ATOM	12938	CD	GLN	C	55	63.988	4.048	65.850	1.00	61.26	C
ATOM	12939	OE1	GLN	C	55	64.541	3.682	64.814	1.00	62.44	O
ATOM	12940	NE2	GLN	C	55	62.663	4.155	65.977	1.00	55.40	N
ATOM	12943	C	GLN	C	55	65.197	6.491	68.835	1.00	54.46	C
ATOM	12944	O	GLN	C	55	66.185	6.363	69.567	1.00	57.35	O
ATOM	12945	N	LEU	C	56	65.157	7.368	67.828	1.00	51.48	N
ATOM	12947	CA	LEU	C	56	66.331	8.196	67.506	1.00	50.79	C
ATOM	12949	CB	LEU	C	56	66.500	8.354	65.983	1.00	51.27	C
ATOM	12952	CG	LEU	C	56	66.445	7.101	65.101	1.00	51.47	C
ATOM	12954	CD1	LEU	C	56	66.780	7.437	63.654	1.00	48.56	C
ATOM	12958	CD2	LEU	C	56	67.364	6.071	65.629	1.00	47.53	C
ATOM	12962	C	LEU	C	56	66.333	9.594	68.071	1.00	46.70	C
ATOM	12963	O	LEU	C	56	67.129	10.385	67.639	1.00	50.22	O
ATOM	12964	N	SER	C	57	65.453	9.904	69.012	1.00	48.97	N
ATOM	12966	CA	SER	C	57	65.298	11.260	69.565	1.00	45.66	C
ATOM	12968	CB	SER	C	57	63.841	11.680	69.338	1.00	44.35	C
ATOM	12971	OG	SER	C	57	63.487	12.916	69.932	1.00	48.13	O
ATOM	12973	C	SER	C	57	65.585	11.166	71.061	1.00	45.21	C
ATOM	12974	O	SER	C	57	64.960	10.361	71.721	1.00	46.15	O
ATOM	12975	N	SER	C	58	66.513	11.955	71.608	1.00	45.62	N
ATOM	12977	CA	SER	C	58	66.828	11.885	73.068	1.00	44.99	C
ATOM	12979	CB	SER	C	58	68.186	12.471	73.363	1.00	39.39	C
ATOM	12982	OG	SER	C	58	68.146	13.786	72.887	1.00	39.14	O
ATOM	12984	C	SER	C	58	65.869	12.689	73.911	1.00	44.75	C
ATOM	12985	O	SER	C	58	65.676	12.433	75.101	1.00	48.81	O
ATOM	12986	N	THR	C	59	65.272	13.684	73.297	1.00	44.46	N
ATOM	12988	CA	THR	C	59	64.320	14.493	73.998	1.00	44.45	C
ATOM	12990	CB	THR	C	59	64.257	15.835	73.328	1.00	39.83	C
ATOM	12992	OG1	THR	C	59	63.953	15.610	71.960	1.00	44.67	O
ATOM	12994	CG2	THR	C	59	65.592	16.504	73.267	1.00	42.08	C
ATOM	12998	C	THR	C	59	62.910	13.889	73.942	1.00	49.34	C
ATOM	12999	O	THR	C	59	61.953	14.574	74.329	1.00	60.35	O
ATOM	13000	N	TYR	C	60	62.732	12.652	73.481	1.00	45.28	N
ATOM	13002	CA	TYR	C	60	61.378	12.126	73.373	1.00	42.73	C
ATOM	13004	CB	TYR	C	60	61.255	11.078	72.235	1.00	44.34	C
ATOM	13007	CG	TYR	C	60	60.194	10.045	72.509	1.00	39.04	C
ATOM	13008	CD1	TYR	C	60	58.876	10.239	72.078	1.00	35.41	C
ATOM	13010	CE1	TYR	C	60	57.873	9.308	72.344	1.00	37.20	C
ATOM	13012	CZ	TYR	C	60	58.178	8.161	73.048	1.00	48.24	C
ATOM	13013	OH	TYR	C	60	57.188	7.246	73.312	1.00	56.91	O
ATOM	13015	CE2	TYR	C	60	59.496	7.934	73.495	1.00	47.13	C
ATOM	13017	CD2	TYR	C	60	60.496	8.895	73.223	1.00	35.96	C
ATOM	13019	C	TYR	C	60	61.040	11.487	74.690	1.00	47.68	C
ATOM	13020	O	TYR	C	60	61.858	10.721	75.189	1.00	47.26	O
ATOM	13021	N	ARG	C	61	59.843	11.823	75.211	1.00	48.05	N
ATOM	13023	CA	ARG	C	61	59.216	11.303	76.438	1.00	46.98	C

ATOM	13025	CB	ARG	C	61	58.773	12.440	77.347	1.00	49.63	C
ATOM	13028	CG	ARG	C	61	59.774	12.823	78.369	1.00	60.48	C
ATOM	13031	CD	ARG	C	61	60.050	11.712	79.429	1.00	66.22	C
ATOM	13034	NE	ARG	C	61	60.843	10.550	78.950	1.00	69.25	N
ATOM	13036	CZ	ARG	C	61	62.129	10.585	78.575	1.00	73.53	C
ATOM	13037	NH1	ARG	C	61	62.838	11.717	78.591	1.00	76.07	N
ATOM	13040	NH2	ARG	C	61	62.719	9.472	78.174	1.00	74.09	N
ATOM	13043	C	ARG	C	61	57.932	10.601	76.126	1.00	46.33	C
ATOM	13044	O	ARG	C	61	57.148	11.136	75.381	1.00	41.21	O
ATOM	13045	N	ASP	C	62	57.694	9.431	76.724	1.00	52.19	N
ATOM	13047	CA	ASP	C	62	56.483	8.630	76.471	1.00	53.39	C
ATOM	13049	CB	ASP	C	62	56.850	7.160	76.486	1.00	54.99	C
ATOM	13052	CG	ASP	C	62	55.795	6.279	75.881	1.00	58.08	C
ATOM	13053	OD1	ASP	C	62	54.599	6.664	75.822	1.00	57.84	O
ATOM	13054	OD2	ASP	C	62	56.086	5.151	75.442	1.00	62.01	O
ATOM	13055	C	ASP	C	62	55.442	8.874	77.549	1.00	52.07	C
ATOM	13056	O	ASP	C	62	55.779	8.845	78.699	1.00	48.18	O
ATOM	13057	N	LEU	C	63	54.192	9.116	77.150	1.00	57.80	N
ATOM	13059	CA	LEU	C	63	53.075	9.402	78.057	1.00	56.98	C
ATOM	13061	CB	LEU	C	63	52.160	10.437	77.404	1.00	57.29	C
ATOM	13064	CG	LEU	C	63	52.776	11.820	77.240	1.00	58.93	C
ATOM	13066	CD1	LEU	C	63	51.756	12.771	76.610	1.00	58.33	C
ATOM	13070	CD2	LEU	C	63	53.270	12.356	78.568	1.00	56.05	C
ATOM	13074	C	LEU	C	63	52.234	8.183	78.511	1.00	57.00	C
ATOM	13075	O	LEU	C	63	51.489	8.276	79.475	1.00	56.10	O
ATOM	13076	N	ARG	C	64	52.323	7.053	77.828	1.00	60.31	N
ATOM	13078	CA	ARG	C	64	51.702	5.821	78.337	1.00	63.72	C
ATOM	13080	CB	ARG	C	64	52.093	5.634	79.801	1.00	66.02	C
ATOM	13083	CG	ARG	C	64	53.077	4.540	80.025	1.00	71.85	C
ATOM	13086	CD	ARG	C	64	54.241	4.949	80.865	1.00	76.21	C
ATOM	13089	NE	ARG	C	64	55.478	4.473	80.255	1.00	83.39	N
ATOM	13091	CZ	ARG	C	64	55.840	4.763	79.018	1.00	86.32	C
ATOM	13092	NH1	ARG	C	64	55.045	5.527	78.271	1.00	87.82	N
ATOM	13095	NH2	ARG	C	64	56.989	4.300	78.528	1.00	87.10	N
ATOM	13098	C	ARG	C	64	50.204	5.790	78.293	1.00	63.01	C
ATOM	13099	O	ARG	C	64	49.556	5.513	79.292	1.00	67.08	O
ATOM	13100	N	LYS	C	65	49.639	6.056	77.135	1.00	62.20	N
ATOM	13102	CA	LYS	C	65	48.203	6.201	77.021	1.00	56.21	C
ATOM	13104	CB	LYS	C	65	47.742	7.574	77.559	1.00	53.38	C
ATOM	13107	CG	LYS	C	65	46.223	7.711	77.701	1.00	61.59	C
ATOM	13110	CD	LYS	C	65	45.772	8.749	78.771	1.00	65.72	C
ATOM	13113	CE	LYS	C	65	46.070	10.201	78.354	1.00	68.02	C
ATOM	13116	NZ	LYS	C	65	45.991	11.186	79.492	1.00	69.89	N
ATOM	13120	C	LYS	C	65	48.062	6.104	75.552	1.00	50.29	C
ATOM	13121	O	LYS	C	65	48.950	6.506	74.846	1.00	42.57	O
ATOM	13122	N	GLY	C	66	46.965	5.552	75.088	1.00	53.19	N
ATOM	13124	CA	GLY	C	66	46.748	5.388	73.668	1.00	53.88	C
ATOM	13127	C	GLY	C	66	45.712	6.406	73.280	1.00	55.77	C
ATOM	13128	O	GLY	C	66	44.967	6.899	74.141	1.00	61.89	O
ATOM	13129	N	VAL	C	67	45.654	6.713	71.993	1.00	52.57	N
ATOM	13131	CA	VAL	C	67	44.753	7.726	71.494	1.00	52.31	C
ATOM	13133	CB	VAL	C	67	45.485	9.074	71.457	1.00	56.46	C
ATOM	13135	CG1	VAL	C	67	46.912	8.861	71.015	1.00	61.44	C
ATOM	13139	CG2	VAL	C	67	44.798	10.083	70.564	1.00	59.86	C
ATOM	13143	C	VAL	C	67	44.323	7.234	70.146	1.00	45.56	C
ATOM	13144	O	VAL	C	67	45.009	6.468	69.525	1.00	50.56	O
ATOM	13145	N	TYR	C	68	43.162	7.646	69.703	1.00	46.81	N

ATOM	13147	CA	TYR	C	68	42.612	7.210	68.435	1.00	49.00	C
ATOM	13149	CB	TYR	C	68	41.772	5.909	68.608	1.00	53.23	C
ATOM	13152	CG	TYR	C	68	40.433	6.120	69.280	1.00	57.32	C
ATOM	13153	CD1	TYR	C	68	39.298	6.444	68.537	1.00	61.05	C
ATOM	13155	CE1	TYR	C	68	38.076	6.653	69.151	1.00	62.40	C
ATOM	13157	CZ	TYR	C	68	37.980	6.524	70.533	1.00	65.60	C
ATOM	13158	OH	TYR	C	68	36.814	6.708	71.234	1.00	73.33	O
ATOM	13160	CE2	TYR	C	68	39.076	6.200	71.277	1.00	68.48	C
ATOM	13162	CD2	TYR	C	68	40.302	6.000	70.658	1.00	61.58	C
ATOM	13164	C	TYR	C	68	41.731	8.358	68.011	1.00	45.30	C
ATOM	13165	O	TYR	C	68	41.033	8.953	68.837	1.00	41.65	O
ATOM	13166	N	VAL	C	69	41.749	8.698	66.735	1.00	45.31	N
ATOM	13168	CA	VAL	C	69	40.903	9.802	66.283	1.00	40.69	C
ATOM	13170	CB	VAL	C	69	41.736	11.055	66.122	1.00	38.52	C
ATOM	13172	CG1	VAL	C	69	40.861	12.229	65.749	1.00	42.88	C
ATOM	13176	CG2	VAL	C	69	42.426	11.348	67.410	1.00	38.40	C
ATOM	13180	C	VAL	C	69	40.159	9.561	64.990	1.00	38.40	C
ATOM	13181	O	VAL	C	69	40.759	9.309	63.978	1.00	36.05	O
ATOM	13182	N	PRO	C	70	38.837	9.625	65.047	1.00	41.06	N
ATOM	13183	CA	PRO	C	70	37.978	9.597	63.862	1.00	41.06	C
ATOM	13185	CB	PRO	C	70	36.731	8.856	64.378	1.00	39.33	C
ATOM	13188	CG	PRO	C	70	36.868	8.792	65.844	1.00	34.86	C
ATOM	13191	CD	PRO	C	70	38.030	9.668	66.268	1.00	41.35	C
ATOM	13194	C	PRO	C	70	37.582	11.001	63.320	1.00	43.22	C
ATOM	13195	O	PRO	C	70	37.305	11.927	64.102	1.00	41.52	O
ATOM	13196	N	TYR	C	71	37.561	11.119	61.985	1.00	48.43	N
ATOM	13198	CA	TYR	C	71	37.249	12.328	61.206	1.00	45.43	C
ATOM	13200	CB	TYR	C	71	38.446	12.615	60.317	1.00	47.57	C
ATOM	13203	CG	TYR	C	71	39.761	12.912	61.024	1.00	45.81	C
ATOM	13204	CD1	TYR	C	71	39.997	14.125	61.636	1.00	46.17	C
ATOM	13206	CE1	TYR	C	71	41.203	14.358	62.268	1.00	46.12	C
ATOM	13208	CZ	TYR	C	71	42.180	13.407	62.281	1.00	42.63	C
ATOM	13209	OH	TYR	C	71	43.393	13.608	62.893	1.00	42.50	O
ATOM	13211	CE2	TYR	C	71	41.963	12.246	61.683	1.00	44.84	C
ATOM	13213	CD2	TYR	C	71	40.770	11.993	61.062	1.00	47.18	C
ATOM	13215	C	TYR	C	71	36.034	12.055	60.270	1.00	48.45	C
ATOM	13216	O	TYR	C	71	35.606	10.915	60.053	1.00	45.82	O
ATOM	13217	N	THR	C	72	35.456	13.081	59.683	1.00	47.92	N
ATOM	13219	CA	THR	C	72	34.356	12.805	58.760	1.00	45.15	C
ATOM	13221	CB	THR	C	72	34.027	14.021	57.966	1.00	40.98	C
ATOM	13223	OG1	THR	C	72	33.809	15.111	58.867	1.00	39.12	O
ATOM	13225	CG2	THR	C	72	32.706	13.846	57.309	1.00	48.15	C
ATOM	13229	C	THR	C	72	34.709	11.612	57.857	1.00	45.22	C
ATOM	13230	O	THR	C	72	33.884	10.719	57.657	1.00	47.99	O
ATOM	13231	N	GLN	C	73	35.919	11.612	57.302	1.00	47.77	N
ATOM	13233	CA	GLN	C	73	36.473	10.435	56.643	1.00	48.67	C
ATOM	13235	CB	GLN	C	73	36.522	10.536	55.123	1.00	48.78	C
ATOM	13238	CG	GLN	C	73	35.190	10.873	54.510	1.00	58.10	C
ATOM	13241	CD	GLN	C	73	34.661	9.825	53.533	1.00	65.47	C
ATOM	13242	OE1	GLN	C	73	34.197	10.163	52.435	1.00	72.75	O
ATOM	13243	NE2	GLN	C	73	34.701	8.555	53.939	1.00	71.25	N
ATOM	13246	C	GLN	C	73	37.866	10.291	57.206	1.00	53.92	C
ATOM	13247	O	GLN	C	73	38.559	11.293	57.431	1.00	59.91	O
ATOM	13248	N	GLY	C	74	38.274	9.049	57.462	1.00	55.15	N
ATOM	13250	CA	GLY	C	74	39.616	8.758	57.943	1.00	45.87	C
ATOM	13253	C	GLY	C	74	39.679	8.620	59.445	1.00	44.69	C
ATOM	13254	O	GLY	C	74	38.937	9.283	60.166	1.00	46.21	O

ATOM	13255	N	LYS	C	75	40.548	7.729	59.907	1.00	42.25	N
ATOM	13257	CA	LYS	C	75	40.894	7.639	61.306	1.00	40.58	C
ATOM	13259	CB	LYS	C	75	39.809	6.919	62.124	1.00	48.07	C
ATOM	13262	CG	LYS	C	75	39.614	5.420	61.883	1.00	48.51	C
ATOM	13265	CD	LYS	C	75	38.232	4.997	62.417	1.00	56.60	C
ATOM	13268	CE	LYS	C	75	37.077	5.271	61.414	1.00	56.69	C
ATOM	13271	NZ	LYS	C	75	36.653	4.074	60.594	1.00	52.24	N
ATOM	13275	C	LYS	C	75	42.270	6.970	61.410	1.00	41.75	C
ATOM	13276	O	LYS	C	75	42.739	6.338	60.471	1.00	36.13	O
ATOM	13277	N	TRP	C	76	42.928	7.114	62.547	1.00	40.64	N
ATOM	13279	CA	TRP	C	76	44.226	6.491	62.759	1.00	41.83	C
ATOM	13281	CB	TRP	C	76	45.383	7.434	62.347	1.00	46.53	C
ATOM	13284	CG	TRP	C	76	45.243	8.876	62.701	1.00	48.68	C
ATOM	13285	CD1	TRP	C	76	44.953	9.877	61.845	1.00	52.07	C
ATOM	13287	NE1	TRP	C	76	44.909	11.087	62.505	1.00	48.68	N
ATOM	13289	CE2	TRP	C	76	45.183	10.869	63.828	1.00	35.18	C
ATOM	13290	CD2	TRP	C	76	45.401	9.492	63.992	1.00	46.84	C
ATOM	13291	CE3	TRP	C	76	45.705	9.007	65.273	1.00	46.09	C
ATOM	13293	CZ3	TRP	C	76	45.773	9.884	66.311	1.00	41.49	C
ATOM	13295	CH2	TRP	C	76	45.548	11.258	66.099	1.00	43.75	C
ATOM	13297	CZ2	TRP	C	76	45.254	11.751	64.859	1.00	38.46	C
ATOM	13299	C	TRP	C	76	44.298	6.196	64.227	1.00	41.30	C
ATOM	13300	O	TRP	C	76	43.547	6.756	65.015	1.00	44.46	O
ATOM	13301	N	GLU	C	77	45.182	5.313	64.634	1.00	45.94	N
ATOM	13303	CA	GLU	C	77	45.296	5.053	66.052	1.00	48.17	C
ATOM	13305	CB	GLU	C	77	44.775	3.663	66.408	1.00	52.51	C
ATOM	13308	CG	GLU	C	77	44.214	3.526	67.827	1.00	59.61	C
ATOM	13311	CD	GLU	C	77	43.153	2.429	67.948	1.00	63.65	C
ATOM	13312	OE1	GLU	C	77	42.966	1.729	66.889	1.00	61.90	O
ATOM	13313	OE2	GLU	C	77	42.540	2.277	69.099	1.00	61.88	O
ATOM	13314	C	GLU	C	77	46.744	5.240	66.353	1.00	44.15	C
ATOM	13315	O	GLU	C	77	47.580	5.038	65.481	1.00	50.71	O
ATOM	13316	N	GLY	C	78	47.044	5.661	67.572	1.00	45.58	N
ATOM	13318	CA	GLY	C	78	48.423	5.866	67.994	1.00	45.17	C
ATOM	13321	C	GLY	C	78	48.639	5.842	69.506	1.00	47.59	C
ATOM	13322	O	GLY	C	78	47.757	5.539	70.298	1.00	51.18	O
ATOM	13323	N	GLU	C	79	49.850	6.195	69.897	1.00	49.48	N
ATOM	13325	CA	GLU	C	79	50.272	6.234	71.275	1.00	48.73	C
ATOM	13327	CB	GLU	C	79	51.404	5.178	71.418	1.00	56.64	C
ATOM	13330	CG	GLU	C	79	51.511	4.299	70.145	1.00	57.50	C
ATOM	13333	CD	GLU	C	79	52.118	2.920	70.337	1.00	61.57	C
ATOM	13334	OE1	GLU	C	79	51.371	1.881	70.186	1.00	64.71	O
ATOM	13335	OE2	GLU	C	79	53.349	2.881	70.607	1.00	68.25	O
ATOM	13336	C	GLU	C	79	50.759	7.688	71.503	1.00	47.19	C
ATOM	13337	O	GLU	C	79	51.353	8.279	70.596	1.00	48.26	O
ATOM	13338	N	LEU	C	80	50.507	8.280	72.669	1.00	42.10	N
ATOM	13340	CA	LEU	C	80	50.942	9.647	72.904	1.00	39.01	C
ATOM	13342	CB	LEU	C	80	50.042	10.306	73.887	1.00	41.35	C
ATOM	13345	CG	LEU	C	80	48.580	10.390	73.740	1.00	42.44	C
ATOM	13347	CD1	LEU	C	80	48.100	10.134	75.134	1.00	42.44	C
ATOM	13351	CD2	LEU	C	80	48.212	11.816	73.219	1.00	38.22	C
ATOM	13355	C	LEU	C	80	52.283	9.789	73.570	1.00	41.97	C
ATOM	13356	O	LEU	C	80	52.812	8.841	74.152	1.00	41.89	O
ATOM	13357	N	GLY	C	81	52.791	11.022	73.540	1.00	42.33	N
ATOM	13359	CA	GLY	C	81	54.096	11.359	74.080	1.00	37.86	C
ATOM	13362	C	GLY	C	81	54.408	12.832	73.856	1.00	38.28	C
ATOM	13363	O	GLY	C	81	53.588	13.564	73.363	1.00	41.07	O

ATOM	13364	N	THR	C	82	55.593	13.298	74.206	1.00	42.53	N
ATOM	13366	CA	THR	C	82	55.918	14.658	73.863	1.00	45.55	C
ATOM	13368	CB	THR	C	82	55.774	15.597	75.028	1.00	47.68	C
ATOM	13370	OG1	THR	C	82	56.874	15.384	75.898	1.00	52.01	O
ATOM	13372	CG2	THR	C	82	54.529	15.315	75.871	1.00	49.71	C
ATOM	13376	C	THR	C	82	57.341	14.742	73.407	1.00	46.27	C
ATOM	13377	O	THR	C	82	58.187	13.956	73.830	1.00	44.96	O
ATOM	13378	N	ASP	C	83	57.616	15.725	72.551	1.00	43.18	N
ATOM	13380	CA	ASP	C	83	58.959	15.904	72.074	1.00	39.07	C
ATOM	13382	CB	ASP	C	83	59.194	14.931	70.959	1.00	35.57	C
ATOM	13385	CG	ASP	C	83	60.621	14.729	70.684	1.00	45.60	C
ATOM	13386	OD1	ASP	C	83	61.426	15.599	71.102	1.00	43.07	O
ATOM	13387	OD2	ASP	C	83	61.036	13.724	70.063	1.00	50.85	O
ATOM	13388	C	ASP	C	83	59.095	17.351	71.621	1.00	41.05	C
ATOM	13389	O	ASP	C	83	58.131	18.100	71.679	1.00	44.03	O
ATOM	13390	N	LEU	C	84	60.277	17.758	71.173	1.00	41.47	N
ATOM	13392	CA	LEU	C	84	60.484	19.150	70.752	1.00	40.67	C
ATOM	13394	CB	LEU	C	84	61.977	19.519	70.806	1.00	39.63	C
ATOM	13397	CG	LEU	C	84	62.501	19.477	72.235	1.00	38.29	C
ATOM	13399	CD1	LEU	C	84	63.972	19.866	72.384	1.00	41.18	C
ATOM	13403	CD2	LEU	C	84	61.664	20.398	72.966	1.00	35.07	C
ATOM	13407	C	LEU	C	84	59.986	19.298	69.361	1.00	38.41	C
ATOM	13408	O	LEU	C	84	60.002	18.363	68.623	1.00	46.50	O
ATOM	13409	N	VAL	C	85	59.563	20.484	68.990	1.00	42.93	N
ATOM	13411	CA	VAL	C	85	59.011	20.699	67.676	1.00	43.40	C
ATOM	13413	CB	VAL	C	85	57.500	20.553	67.711	1.00	46.20	C
ATOM	13415	CG1	VAL	C	85	56.968	20.747	66.352	1.00	46.59	C
ATOM	13419	CG2	VAL	C	85	57.087	19.179	68.253	1.00	45.29	C
ATOM	13423	C	VAL	C	85	59.260	22.100	67.248	1.00	45.84	C
ATOM	13424	O	VAL	C	85	58.967	23.024	68.017	1.00	51.25	O
ATOM	13425	N	SER	C	86	59.787	22.268	66.035	1.00	46.65	N
ATOM	13427	CA	SER	C	86	60.049	23.583	65.454	1.00	43.45	C
ATOM	13429	CB	SER	C	86	61.523	23.738	65.141	1.00	49.82	C
ATOM	13432	OG	SER	C	86	62.315	22.686	65.709	1.00	55.85	O
ATOM	13434	C	SER	C	86	59.319	23.747	64.148	1.00	46.29	C
ATOM	13435	O	SER	C	86	58.902	22.798	63.540	1.00	51.68	O
ATOM	13436	N	ILE	C	87	59.125	24.972	63.700	1.00	52.23	N
ATOM	13438	CA	ILE	C	87	58.619	25.168	62.345	1.00	49.09	C
ATOM	13440	CB	ILE	C	87	57.218	25.802	62.337	1.00	45.63	C
ATOM	13442	CG1	ILE	C	87	56.382	25.334	63.533	1.00	45.33	C
ATOM	13445	CD1	ILE	C	87	54.875	25.472	63.339	1.00	45.27	C
ATOM	13449	CG2	ILE	C	87	56.523	25.509	61.022	1.00	47.91	C
ATOM	13453	C	ILE	C	87	59.645	25.999	61.570	1.00	49.56	C
ATOM	13454	O	ILE	C	87	59.723	27.206	61.765	1.00	58.01	O
ATOM	13455	N	PRO	C	88	60.434	25.374	60.701	1.00	50.26	N
ATOM	13456	CA	PRO	C	88	61.496	26.064	59.944	1.00	51.41	C
ATOM	13458	CB	PRO	C	88	61.956	25.005	58.920	1.00	51.62	C
ATOM	13461	CG	PRO	C	88	61.429	23.694	59.411	1.00	48.25	C
ATOM	13464	CD	PRO	C	88	60.353	23.944	60.378	1.00	48.79	C
ATOM	13467	C	PRO	C	88	61.054	27.350	59.206	1.00	52.93	C
ATOM	13468	O	PRO	C	88	61.716	28.356	59.329	1.00	52.58	O
ATOM	13469	N	HIS	C	89	59.970	27.330	58.447	1.00	52.36	N
ATOM	13471	CA	HIS	C	89	59.525	28.548	57.787	1.00	50.37	C
ATOM	13473	CB	HIS	C	89	59.057	28.232	56.379	1.00	50.86	C
ATOM	13476	CG	HIS	C	89	60.154	27.730	55.490	1.00	56.99	C
ATOM	13477	ND1	HIS	C	89	61.204	28.524	55.084	1.00	62.43	N
ATOM	13479	CE1	HIS	C	89	62.012	27.830	54.307	1.00	57.84	C

ATOM	13481	NE2	HIS	C	89	61.528	26.610	54.196	1.00	56.97	N
ATOM	13483	CD2	HIS	C	89	60.368	26.521	54.928	1.00	59.06	C
ATOM	13485	C	HIS	C	89	58.422	29.176	58.631	1.00	50.27	C
ATOM	13486	O	HIS	C	89	57.299	29.343	58.186	1.00	51.95	O
ATOM	13487	N	GLY	C	90	58.780	29.525	59.865	1.00	51.98	N
ATOM	13489	CA	GLY	C	90	57.866	30.031	60.882	1.00	49.95	C
ATOM	13492	C	GLY	C	90	58.685	30.687	61.980	1.00	47.79	C
ATOM	13493	O	GLY	C	90	59.913	30.701	61.889	1.00	57.85	O
ATOM	13494	N	PRO	C	91	58.029	31.167	63.034	1.00	42.33	N
ATOM	13495	CA	PRO	C	91	58.688	32.056	63.990	1.00	45.30	C
ATOM	13497	CB	PRO	C	91	57.586	32.447	64.952	1.00	43.17	C
ATOM	13500	CG	PRO	C	91	56.415	31.674	64.623	1.00	41.44	C
ATOM	13503	CD	PRO	C	91	56.658	30.820	63.433	1.00	45.00	C
ATOM	13506	C	PRO	C	91	59.751	31.213	64.620	1.00	48.09	C
ATOM	13507	O	PRO	C	91	59.535	30.024	64.624	1.00	54.44	O
ATOM	13508	N	GLN	C	92	60.843	31.737	65.131	1.00	53.59	N
ATOM	13510	CA	GLN	C	92	61.921	30.814	65.443	1.00	59.67	C
ATOM	13512	CB	GLN	C	92	63.309	31.354	65.139	1.00	62.99	C
ATOM	13515	CG	GLN	C	92	63.355	32.565	64.259	1.00	69.98	C
ATOM	13518	CD	GLN	C	92	64.686	32.618	63.546	1.00	76.93	C
ATOM	13519	OE1	GLN	C	92	65.246	31.554	63.191	1.00	79.49	O
ATOM	13520	NE2	GLN	C	92	65.210	33.837	63.335	1.00	74.23	N
ATOM	13523	C	GLN	C	92	61.893	30.449	66.851	1.00	59.04	C
ATOM	13524	O	GLN	C	92	62.643	30.978	67.638	1.00	67.08	O
ATOM	13525	N	VAL	C	93	61.035	29.507	67.152	1.00	57.44	N
ATOM	13527	CA	VAL	C	93	60.894	29.057	68.483	1.00	58.21	C
ATOM	13529	CB	VAL	C	93	59.535	29.387	68.986	1.00	60.39	C
ATOM	13531	CG1	VAL	C	93	59.427	30.878	69.168	1.00	64.36	C
ATOM	13535	CG2	VAL	C	93	58.494	28.878	68.008	1.00	60.84	C
ATOM	13539	C	VAL	C	93	61.032	27.581	68.473	1.00	59.93	C
ATOM	13540	O	VAL	C	93	61.183	26.945	67.436	1.00	63.78	O
ATOM	13541	N	THR	C	94	60.970	27.039	69.664	1.00	60.01	N
ATOM	13543	CA	THR	C	94	61.045	25.637	69.862	1.00	58.54	C
ATOM	13545	CB	THR	C	94	62.448	25.299	70.252	1.00	59.14	C
ATOM	13547	OG1	THR	C	94	63.337	26.190	69.577	1.00	65.27	O
ATOM	13549	CG2	THR	C	94	62.847	23.941	69.736	1.00	60.54	C
ATOM	13553	C	THR	C	94	60.123	25.447	71.023	1.00	59.67	C
ATOM	13554	O	THR	C	94	60.260	26.139	72.029	1.00	64.36	O
ATOM	13555	N	VAL	C	95	59.170	24.539	70.905	1.00	55.96	N
ATOM	13557	CA	VAL	C	95	58.299	24.281	72.036	1.00	52.71	C
ATOM	13559	CB	VAL	C	95	56.881	24.835	71.815	1.00	49.07	C
ATOM	13561	CG1	VAL	C	95	56.947	26.091	71.056	1.00	53.95	C
ATOM	13565	CG2	VAL	C	95	56.065	23.897	71.054	1.00	47.27	C
ATOM	13569	C	VAL	C	95	58.193	22.811	72.218	1.00	48.65	C
ATOM	13570	O	VAL	C	95	58.321	22.079	71.264	1.00	52.66	O
ATOM	13571	N	ARG	C	96	57.955	22.378	73.446	1.00	48.25	N
ATOM	13573	CA	ARG	C	96	57.728	20.980	73.704	1.00	44.23	C
ATOM	13575	CB	ARG	C	96	58.145	20.582	75.105	1.00	43.93	C
ATOM	13578	CG	ARG	C	96	57.739	19.139	75.427	1.00	45.83	C
ATOM	13581	CD	ARG	C	96	58.485	18.481	76.591	1.00	44.68	C
ATOM	13584	NE	ARG	C	96	59.906	18.368	76.346	1.00	43.10	N
ATOM	13586	CZ	ARG	C	96	60.516	17.279	75.875	1.00	44.04	C
ATOM	13587	NH1	ARG	C	96	59.848	16.181	75.591	1.00	32.28	N
ATOM	13590	NH2	ARG	C	96	61.827	17.292	75.698	1.00	50.62	N
ATOM	13593	C	ARG	C	96	56.242	20.824	73.546	1.00	45.00	C
ATOM	13594	O	ARG	C	96	55.491	21.695	74.008	1.00	45.85	O
ATOM	13595	N	ALA	C	97	55.813	19.729	72.908	1.00	43.97	N

ATOM	13597	CA	ALA	C	97	54.388	19.518	72.622	1.00	42.35	C
ATOM	13599	CB	ALA	C	97	54.060	20.108	71.278	1.00	42.11	C
ATOM	13603	C	ALA	C	97	53.894	18.105	72.636	1.00	40.41	C
ATOM	13604	O	ALA	C	97	54.575	17.166	72.319	1.00	51.69	O
ATOM	13605	N	ASN	C	98	52.651	17.957	72.994	1.00	46.04	N
ATOM	13607	CA	ASN	C	98	52.017	16.668	72.887	1.00	44.67	C
ATOM	13609	CB	ASN	C	98	50.544	16.823	73.230	1.00	44.47	C
ATOM	13612	CG	ASN	C	98	50.342	17.320	74.619	1.00	44.86	C
ATOM	13613	OD1	ASN	C	98	50.884	16.760	75.563	1.00	46.18	O
ATOM	13614	ND2	ASN	C	98	49.564	18.378	74.762	1.00	48.48	N
ATOM	13617	C	ASN	C	98	52.175	16.171	71.463	1.00	41.60	C
ATOM	13618	O	ASN	C	98	52.201	16.957	70.538	1.00	39.27	O
ATOM	13619	N	ILE	C	99	52.269	14.866	71.286	1.00	41.90	N
ATOM	13621	CA	ILE	C	99	52.403	14.307	69.954	1.00	46.94	C
ATOM	13623	CB	ILE	C	99	53.861	14.330	69.470	1.00	41.20	C
ATOM	13625	CG1	ILE	C	99	54.362	15.744	69.192	1.00	46.97	C
ATOM	13628	CD1	ILE	C	99	55.885	15.841	68.773	1.00	44.25	C
ATOM	13632	CG2	ILE	C	99	53.939	13.652	68.168	1.00	45.91	C
ATOM	13636	C	ILE	C	99	51.914	12.870	69.953	1.00	47.27	C
ATOM	13637	O	ILE	C	99	52.407	12.081	70.711	1.00	58.57	O
ATOM	13638	N	ALA	C	100	50.944	12.554	69.116	1.00	46.89	N
ATOM	13640	CA	ALA	C	100	50.418	11.219	68.962	1.00	46.93	C
ATOM	13642	CB	ALA	C	100	48.949	11.274	68.540	1.00	45.92	C
ATOM	13646	C	ALA	C	100	51.197	10.514	67.884	1.00	48.45	C
ATOM	13647	O	ALA	C	100	51.172	10.906	66.711	1.00	45.06	O
ATOM	13648	N	ALA	C	101	51.872	9.436	68.250	1.00	47.39	N
ATOM	13650	CA	ALA	C	101	52.639	8.732	67.260	1.00	46.43	C
ATOM	13652	CB	ALA	C	101	53.820	8.041	67.940	1.00	47.14	C
ATOM	13656	C	ALA	C	101	51.690	7.749	66.604	1.00	41.79	C
ATOM	13657	O	ALA	C	101	51.118	6.968	67.307	1.00	48.05	O
ATOM	13658	N	ILE	C	102	51.500	7.781	65.285	1.00	42.66	N
ATOM	13660	CA	ILE	C	102	50.507	6.878	64.635	1.00	42.52	C
ATOM	13662	CB	ILE	C	102	49.916	7.478	63.366	1.00	37.68	C
ATOM	13664	CG1	ILE	C	102	49.273	8.809	63.646	1.00	42.95	C
ATOM	13667	CD1	ILE	C	102	49.029	9.597	62.382	1.00	48.42	C
ATOM	13671	CG2	ILE	C	102	48.845	6.590	62.789	1.00	42.11	C
ATOM	13675	C	ILE	C	102	51.141	5.609	64.183	1.00	42.17	C
ATOM	13676	O	ILE	C	102	52.146	5.671	63.469	1.00	50.97	O
ATOM	13677	N	THR	C	103	50.529	4.493	64.581	1.00	39.36	N
ATOM	13679	CA	THR	C	103	50.950	3.130	64.257	1.00	38.74	C
ATOM	13681	CB	THR	C	103	51.024	2.324	65.542	1.00	31.31	C
ATOM	13683	OG1	THR	C	103	49.802	2.511	66.252	1.00	37.91	O
ATOM	13685	CG2	THR	C	103	51.988	2.821	66.443	1.00	25.93	C
ATOM	13689	C	THR	C	103	49.936	2.306	63.434	1.00	44.91	C
ATOM	13690	O	THR	C	103	50.222	1.153	63.067	1.00	49.83	O
ATOM	13691	N	GLU	C	104	48.764	2.866	63.161	1.00	50.27	N
ATOM	13693	CA	GLU	C	104	47.674	2.128	62.535	1.00	52.57	C
ATOM	13695	CB	GLU	C	104	46.967	1.315	63.591	1.00	58.34	C
ATOM	13698	CG	GLU	C	104	47.546	-0.048	63.935	1.00	69.41	C
ATOM	13701	CD	GLU	C	104	46.428	-0.983	64.324	1.00	78.52	C
ATOM	13702	OE1	GLU	C	104	45.341	-0.435	64.642	1.00	80.85	O
ATOM	13703	OE2	GLU	C	104	46.629	-2.229	64.313	1.00	82.93	O
ATOM	13704	C	GLU	C	104	46.607	3.068	62.052	1.00	48.07	C
ATOM	13705	O	GLU	C	104	46.134	3.888	62.835	1.00	35.83	O
ATOM	13706	N	SER	C	105	46.185	2.970	60.800	1.00	49.78	N
ATOM	13708	CA	SER	C	105	45.155	3.896	60.329	1.00	51.92	C
ATOM	13710	CB	SER	C	105	45.802	5.173	59.821	1.00	48.19	C

ATOM	13713	OG	SER	C	105	46.446	4.896	58.587	1.00	50.41	O
ATOM	13715	C	SER	C	105	44.336	3.307	59.195	1.00	53.97	C
ATOM	13716	O	SER	C	105	44.748	2.324	58.583	1.00	54.52	O
ATOM	13717	N	ASP	C	106	43.190	3.933	58.931	1.00	48.85	N
ATOM	13719	CA	ASP	C	106	42.327	3.568	57.825	1.00	54.43	C
ATOM	13721	CB	ASP	C	106	41.117	2.695	58.274	1.00	53.40	C
ATOM	13724	CG	ASP	C	106	40.419	1.971	57.076	1.00	59.23	C
ATOM	13725	OD1	ASP	C	106	41.164	1.374	56.243	1.00	60.96	O
ATOM	13726	OD2	ASP	C	106	39.146	1.940	56.861	1.00	64.74	O
ATOM	13727	C	ASP	C	106	41.882	4.891	57.127	1.00	53.64	C
ATOM	13728	O	ASP	C	106	41.304	5.783	57.734	1.00	51.47	O
ATOM	13729	N	LYS	C	107	42.204	4.992	55.848	1.00	54.37	N
ATOM	13731	CA	LYS	C	107	41.853	6.116	54.999	1.00	51.97	C
ATOM	13733	CB	LYS	C	107	40.405	5.986	54.532	1.00	53.57	C
ATOM	13736	CG	LYS	C	107	39.921	4.542	54.124	1.00	55.39	C
ATOM	13739	CD	LYS	C	107	38.335	4.466	54.249	1.00	59.86	C
ATOM	13742	CE	LYS	C	107	37.629	3.148	53.820	1.00	61.09	C
ATOM	13745	NZ	LYS	C	107	36.060	3.234	53.879	1.00	53.27	N
ATOM	13749	C	LYS	C	107	42.133	7.499	55.610	1.00	50.56	C
ATOM	13750	O	LYS	C	107	41.383	8.440	55.412	1.00	51.18	O
ATOM	13751	N	PHE	C	108	43.223	7.613	56.350	1.00	48.34	N
ATOM	13753	CA	PHE	C	108	43.712	8.905	56.787	1.00	47.27	C
ATOM	13755	CB	PHE	C	108	44.540	8.748	58.031	1.00	45.62	C
ATOM	13758	CG	PHE	C	108	44.938	10.029	58.643	1.00	37.04	C
ATOM	13759	CD1	PHE	C	108	43.993	10.892	59.105	1.00	38.32	C
ATOM	13761	CE1	PHE	C	108	44.362	12.075	59.688	1.00	40.30	C
ATOM	13763	CZ	PHE	C	108	45.663	12.392	59.804	1.00	33.49	C
ATOM	13765	CE2	PHE	C	108	46.603	11.535	59.347	1.00	37.53	C
ATOM	13767	CD2	PHE	C	108	46.237	10.357	58.770	1.00	36.71	C
ATOM	13769	C	PHE	C	108	44.660	9.440	55.747	1.00	50.97	C
ATOM	13770	O	PHE	C	108	44.408	10.462	55.088	1.00	53.65	O
ATOM	13771	N	PHE	C	109	45.768	8.718	55.612	1.00	47.95	N
ATOM	13773	CA	PHE	C	109	46.805	9.096	54.701	1.00	47.94	C
ATOM	13775	CB	PHE	C	109	48.006	8.198	54.915	1.00	45.29	C
ATOM	13778	CG	PHE	C	109	48.678	8.429	56.255	1.00	46.27	C
ATOM	13779	CD1	PHE	C	109	49.046	7.389	57.063	1.00	48.64	C
ATOM	13781	CE1	PHE	C	109	49.637	7.618	58.276	1.00	47.73	C
ATOM	13783	CZ	PHE	C	109	49.873	8.893	58.689	1.00	48.46	C
ATOM	13785	CE2	PHE	C	109	49.518	9.933	57.901	1.00	48.66	C
ATOM	13787	CD2	PHE	C	109	48.922	9.707	56.698	1.00	49.42	C
ATOM	13789	C	PHE	C	109	46.226	9.031	53.309	1.00	53.22	C
ATOM	13790	O	PHE	C	109	45.213	8.362	53.118	1.00	60.08	O
ATOM	13791	N	ILE	C	110	46.836	9.748	52.359	1.00	52.83	N
ATOM	13793	CA	ILE	C	110	46.374	9.790	50.976	1.00	52.12	C
ATOM	13795	CB	ILE	C	110	45.836	11.149	50.688	1.00	53.27	C
ATOM	13797	CG1	ILE	C	110	44.566	11.404	51.445	1.00	52.71	C
ATOM	13800	CD1	ILE	C	110	44.141	12.836	51.288	1.00	50.55	C
ATOM	13804	CG2	ILE	C	110	45.504	11.291	49.236	1.00	57.99	C
ATOM	13808	C	ILE	C	110	47.519	9.590	50.019	1.00	54.78	C
ATOM	13809	O	ILE	C	110	48.434	10.408	49.980	1.00	60.18	O
ATOM	13810	N	GLN	C	111	47.485	8.529	49.227	1.00	58.31	N
ATOM	13812	CA	GLN	C	111	48.617	8.239	48.348	1.00	58.73	C
ATOM	13814	CB	GLN	C	111	48.255	7.125	47.389	1.00	61.62	C
ATOM	13817	CG	GLN	C	111	49.245	6.964	46.243	1.00	66.55	C
ATOM	13820	CD	GLN	C	111	48.738	5.997	45.183	1.00	67.87	C
ATOM	13821	OE1	GLN	C	111	49.529	5.413	44.450	1.00	66.00	O
ATOM	13822	NE2	GLN	C	111	47.415	5.837	45.099	1.00	65.39	N

ATOM	13825	C	GLN	C	111	49.047	9.471	47.560	1.00	58.27	C
ATOM	13826	O	GLN	C	111	48.222	10.128	46.924	1.00	57.77	O
ATOM	13827	N	GLY	C	112	50.339	9.788	47.628	1.00	58.53	N
ATOM	13829	CA	GLY	C	112	50.915	10.916	46.916	1.00	59.25	C
ATOM	13832	C	GLY	C	112	50.726	12.291	47.540	1.00	58.52	C
ATOM	13833	O	GLY	C	112	51.104	13.284	46.941	1.00	54.33	O
ATOM	13834	N	SER	C	113	50.158	12.356	48.739	1.00	59.61	N
ATOM	13836	CA	SER	C	113	49.832	13.635	49.370	1.00	59.93	C
ATOM	13838	CB	SER	C	113	49.012	13.380	50.616	1.00	61.27	C
ATOM	13841	OG	SER	C	113	49.791	12.666	51.583	1.00	61.67	O
ATOM	13843	C	SER	C	113	51.044	14.401	49.826	1.00	59.74	C
ATOM	13844	O	SER	C	113	50.970	15.560	50.136	1.00	64.41	O
ATOM	13845	N	ASN	C	114	52.168	13.730	49.879	1.00	60.55	N
ATOM	13847	CA	ASN	C	114	53.389	14.312	50.410	1.00	58.90	C
ATOM	13849	CB	ASN	C	114	53.911	15.426	49.496	1.00	57.44	C
ATOM	13852	CG	ASN	C	114	55.402	15.668	49.693	1.00	62.94	C
ATOM	13853	OD1	ASN	C	114	56.179	14.725	49.898	1.00	58.01	O
ATOM	13854	ND2	ASN	C	114	55.807	16.931	49.657	1.00	67.46	N
ATOM	13857	C	ASN	C	114	53.420	14.734	51.918	1.00	52.44	C
ATOM	13858	O	ASN	C	114	54.474	15.175	52.388	1.00	53.11	O
ATOM	13859	N	TRP	C	115	52.322	14.581	52.662	1.00	48.49	N
ATOM	13861	CA	TRP	C	115	52.311	14.866	54.131	1.00	47.90	C
ATOM	13863	CB	TRP	C	115	51.158	15.786	54.572	1.00	44.85	C
ATOM	13866	CG	TRP	C	115	49.757	15.522	54.098	1.00	35.78	C
ATOM	13867	CD1	TRP	C	115	49.177	16.027	52.986	1.00	38.12	C
ATOM	13869	NE1	TRP	C	115	47.879	15.592	52.868	1.00	39.72	N
ATOM	13871	CE2	TRP	C	115	47.596	14.785	53.936	1.00	41.98	C
ATOM	13872	CD2	TRP	C	115	48.762	14.723	54.734	1.00	40.24	C
ATOM	13873	CE3	TRP	C	115	48.733	13.947	55.898	1.00	36.07	C
ATOM	13875	CZ3	TRP	C	115	47.597	13.286	56.223	1.00	31.67	C
ATOM	13877	CH2	TRP	C	115	46.448	13.366	55.414	1.00	41.59	C
ATOM	13879	CZ2	TRP	C	115	46.431	14.104	54.262	1.00	37.70	C
ATOM	13881	C	TRP	C	115	52.333	13.594	55.024	1.00	49.13	C
ATOM	13882	O	TRP	C	115	51.893	12.529	54.610	1.00	56.05	O
ATOM	13883	N	GLU	C	116	52.835	13.694	56.246	1.00	42.30	N
ATOM	13885	CA	GLU	C	116	53.060	12.493	57.029	1.00	36.92	C
ATOM	13887	CB	GLU	C	116	54.543	12.335	57.308	1.00	35.88	C
ATOM	13890	CG	GLU	C	116	55.428	11.872	56.167	1.00	40.41	C
ATOM	13893	CD	GLU	C	116	56.100	12.992	55.447	1.00	43.69	C
ATOM	13894	OE1	GLU	C	116	56.149	12.999	54.197	1.00	51.67	O
ATOM	13895	OE2	GLU	C	116	56.596	13.871	56.142	1.00	54.68	O
ATOM	13896	C	GLU	C	116	52.378	12.587	58.365	1.00	42.27	C
ATOM	13897	O	GLU	C	116	52.608	11.744	59.249	1.00	44.85	O
ATOM	13898	N	GLY	C	117	51.547	13.609	58.518	1.00	37.85	N
ATOM	13900	CA	GLY	C	117	50.997	13.960	59.807	1.00	33.97	C
ATOM	13903	C	GLY	C	117	50.070	15.133	59.637	1.00	37.13	C
ATOM	13904	O	GLY	C	117	50.056	15.846	58.625	1.00	35.82	O
ATOM	13905	N	ILE	C	118	49.256	15.338	60.636	1.00	36.24	N
ATOM	13907	CA	ILE	C	118	48.332	16.425	60.572	1.00	38.55	C
ATOM	13909	CB	ILE	C	118	46.910	15.921	60.803	1.00	40.07	C
ATOM	13911	CG1	ILE	C	118	45.865	16.999	60.568	1.00	42.31	C
ATOM	13914	CD1	ILE	C	118	44.458	16.429	60.571	1.00	40.16	C
ATOM	13918	CG2	ILE	C	118	46.748	15.448	62.229	1.00	42.62	C
ATOM	13922	C	ILE	C	118	48.776	17.298	61.695	1.00	41.59	C
ATOM	13923	O	ILE	C	118	49.698	16.975	62.440	1.00	47.04	O
ATOM	13924	N	LEU	C	119	48.111	18.419	61.807	1.00	41.76	N
ATOM	13926	CA	LEU	C	119	48.341	19.372	62.878	1.00	39.99	C

ATOM	13928	CB	LEU	C	119	49.449	20.360	62.540	1.00	37.22	C
ATOM	13931	CG	LEU	C	119	49.390	21.634	63.399	1.00	38.87	C
ATOM	13933	CD1	LEU	C	119	49.943	21.327	64.782	1.00	34.70	C
ATOM	13937	CD2	LEU	C	119	50.112	22.835	62.759	1.00	43.63	C
ATOM	13941	C	LEU	C	119	47.033	20.104	63.031	1.00	41.75	C
ATOM	13942	O	LEU	C	119	46.576	20.773	62.106	1.00	46.22	O
ATOM	13943	N	GLY	C	120	46.432	19.962	64.203	1.00	33.31	N
ATOM	13945	CA	GLY	C	120	45.097	20.466	64.406	1.00	37.36	C
ATOM	13948	C	GLY	C	120	45.145	21.751	65.149	1.00	28.62	C
ATOM	13949	O	GLY	C	120	45.838	21.828	66.074	1.00	30.63	O
ATOM	13950	N	LEU	C	121	44.386	22.741	64.718	1.00	38.29	N
ATOM	13952	CA	LEU	C	121	44.536	24.088	65.191	1.00	35.55	C
ATOM	13954	CB	LEU	C	121	44.665	24.999	63.986	1.00	35.76	C
ATOM	13957	CG	LEU	C	121	45.979	24.905	63.170	1.00	39.55	C
ATOM	13959	CD1	LEU	C	121	45.900	25.748	61.887	1.00	42.96	C
ATOM	13963	CD2	LEU	C	121	47.199	25.390	63.947	1.00	36.86	C
ATOM	13967	C	LEU	C	121	43.373	24.531	66.025	1.00	35.86	C
ATOM	13968	O	LEU	C	121	43.358	25.666	66.534	1.00	40.24	O
ATOM	13969	N	ALA	C	122	42.403	23.642	66.181	1.00	33.88	N
ATOM	13971	CA	ALA	C	122	41.178	23.981	66.897	1.00	33.37	C
ATOM	13973	CB	ALA	C	122	40.083	23.167	66.466	1.00	40.73	C
ATOM	13977	C	ALA	C	122	41.352	23.814	68.338	1.00	35.35	C
ATOM	13978	O	ALA	C	122	42.347	23.300	68.812	1.00	44.15	O
ATOM	13979	N	TYR	C	123	40.360	24.257	69.054	1.00	40.96	N
ATOM	13981	CA	TYR	C	123	40.496	24.353	70.490	1.00	46.80	C
ATOM	13983	CB	TYR	C	123	39.324	25.179	71.032	1.00	45.68	C
ATOM	13986	CG	TYR	C	123	39.338	26.623	70.537	1.00	44.89	C
ATOM	13987	CD1	TYR	C	123	38.505	27.065	69.501	1.00	42.26	C
ATOM	13989	CE1	TYR	C	123	38.537	28.386	69.072	1.00	36.64	C
ATOM	13991	CZ	TYR	C	123	39.402	29.271	69.682	1.00	40.46	C
ATOM	13992	OH	TYR	C	123	39.502	30.615	69.319	1.00	46.64	O
ATOM	13994	CE2	TYR	C	123	40.211	28.849	70.689	1.00	40.22	C
ATOM	13996	CD2	TYR	C	123	40.179	27.540	71.109	1.00	43.88	C
ATOM	13998	C	TYR	C	123	40.579	22.951	71.106	1.00	48.13	C
ATOM	13999	O	TYR	C	123	40.430	21.933	70.415	1.00	46.62	O
ATOM	14000	N	ALA	C	124	40.821	22.927	72.405	1.00	48.35	N
ATOM	14002	CA	ALA	C	124	40.937	21.690	73.162	1.00	51.52	C
ATOM	14004	CB	ALA	C	124	41.622	21.999	74.493	1.00	51.80	C
ATOM	14008	C	ALA	C	124	39.643	20.907	73.436	1.00	53.10	C
ATOM	14009	O	ALA	C	124	39.713	19.728	73.722	1.00	58.47	O
ATOM	14010	N	GLU	C	125	38.467	21.522	73.351	1.00	52.58	N
ATOM	14012	CA	GLU	C	125	37.250	20.842	73.809	1.00	48.35	C
ATOM	14014	CB	GLU	C	125	36.012	21.764	73.806	1.00	45.94	C
ATOM	14017	CG	GLU	C	125	34.793	21.123	74.457	1.00	51.12	C
ATOM	14020	CD	GLU	C	125	33.576	22.062	74.676	1.00	65.79	C
ATOM	14021	OE1	GLU	C	125	33.635	23.280	74.340	1.00	73.52	O
ATOM	14022	OE2	GLU	C	125	32.521	21.580	75.191	1.00	69.28	O
ATOM	14023	C	GLU	C	125	36.979	19.597	72.997	1.00	49.63	C
ATOM	14024	O	GLU	C	125	36.159	18.767	73.393	1.00	49.63	O
ATOM	14025	N	ILE	C	126	37.653	19.474	71.855	1.00	47.96	N
ATOM	14027	CA	ILE	C	126	37.477	18.324	70.969	1.00	43.11	C
ATOM	14029	CB	ILE	C	126	36.849	18.722	69.649	1.00	37.68	C
ATOM	14031	CG1	ILE	C	126	37.742	19.681	68.885	1.00	42.13	C
ATOM	14034	CD1	ILE	C	126	37.241	19.947	67.461	1.00	45.08	C
ATOM	14038	CG2	ILE	C	126	35.632	19.390	69.898	1.00	39.52	C
ATOM	14042	C	ILE	C	126	38.755	17.614	70.665	1.00	41.81	C
ATOM	14043	O	ILE	C	126	38.815	16.848	69.708	1.00	47.30	O

ATOM	14044	N	ALA	C	127	39.789	17.856	71.447	1.00 44.88	N
ATOM	14046	CA	ALA	C	127	41.005	17.060	71.286	1.00 49.29	C
ATOM	14048	CB	ALA	C	127	42.164	17.690	71.997	1.00 47.42	C
ATOM	14052	C	ALA	C	127	40.708	15.676	71.871	1.00 53.51	C
ATOM	14053	O	ALA	C	127	39.695	15.503	72.565	1.00 56.30	O
ATOM	14054	N	ARG	C	128	41.570	14.700	71.591	1.00 53.29	N
ATOM	14056	CA	ARG	C	128	41.396	13.345	72.102	1.00 50.59	C
ATOM	14058	CB	ARG	C	128	41.159	12.348	70.949	1.00 57.97	C
ATOM	14061	CG	ARG	C	128	39.759	12.300	70.183	1.00 59.94	C
ATOM	14064	CD	ARG	C	128	38.475	12.155	71.017	1.00 69.66	C
ATOM	14067	NE	ARG	C	128	37.271	12.355	70.198	1.00 76.55	N
ATOM	14069	CZ	ARG	C	128	36.442	11.399	69.770	1.00 84.49	C
ATOM	14070	NH1	ARG	C	128	36.641	10.106	70.062	1.00 85.61	N
ATOM	14073	NH2	ARG	C	128	35.389	11.753	69.034	1.00 86.88	N
ATOM	14076	C	ARG	C	128	42.707	13.008	72.850	1.00 50.92	C
ATOM	14077	O	ARG	C	128	43.799	13.530	72.544	1.00 47.14	O
ATOM	14078	N	PRO	C	129	42.662	12.150	73.847	1.00 45.26	N
ATOM	14079	CA	PRO	C	129	41.469	11.450	74.333	1.00 42.08	C
ATOM	14081	CB	PRO	C	129	42.028	10.478	75.365	1.00 43.25	C
ATOM	14084	CG	PRO	C	129	43.561	10.579	75.290	1.00 38.09	C
ATOM	14087	CD	PRO	C	129	43.892	11.844	74.590	1.00 35.38	C
ATOM	14090	C	PRO	C	129	40.487	12.337	75.054	1.00 49.15	C
ATOM	14091	O	PRO	C	129	39.322	11.949	75.129	1.00 58.20	O
ATOM	14092	N	ASP	C	130	40.919	13.483	75.578	1.00 52.35	N
ATOM	14094	CA	ASP	C	130	40.023	14.394	76.283	1.00 55.40	C
ATOM	14096	CB	ASP	C	130	39.774	13.858	77.664	1.00 61.87	C
ATOM	14099	CG	ASP	C	130	41.048	13.867	78.498	1.00 70.21	C
ATOM	14100	OD1	ASP	C	130	41.533	12.794	78.934	1.00 73.11	O
ATOM	14101	OD2	ASP	C	130	41.650	14.930	78.752	1.00 74.28	O
ATOM	14102	C	ASP	C	130	40.659	15.766	76.453	1.00 55.47	C
ATOM	14103	O	ASP	C	130	41.857	15.911	76.312	1.00 47.00	O
ATOM	14104	N	ASP	C	131	39.835	16.755	76.804	1.00 60.76	N
ATOM	14106	CA	ASP	C	131	40.235	18.173	76.853	1.00 58.88	C
ATOM	14108	CB	ASP	C	131	39.051	19.107	77.223	1.00 63.07	C
ATOM	14111	CG	ASP	C	131	38.290	18.660	78.474	1.00 72.14	C
ATOM	14112	OD1	ASP	C	131	38.685	17.632	79.058	1.00 82.97	O
ATOM	14113	OD2	ASP	C	131	37.281	19.261	78.948	1.00 76.88	O
ATOM	14114	C	ASP	C	131	41.415	18.554	77.696	1.00 52.31	C
ATOM	14115	O	ASP	C	131	41.698	19.728	77.795	1.00 60.98	O
ATOM	14116	N	SER	C	132	42.116	17.620	78.304	1.00 47.46	N
ATOM	14118	CA	SER	C	132	43.311	17.999	79.054	1.00 45.98	C
ATOM	14120	CB	SER	C	132	43.450	17.206	80.331	1.00 46.66	C
ATOM	14123	OG	SER	C	132	42.859	15.924	80.195	1.00 49.20	O
ATOM	14125	C	SER	C	132	44.574	17.843	78.218	1.00 47.95	C
ATOM	14126	O	SER	C	132	45.649	18.235	78.650	1.00 52.86	O
ATOM	14127	N	LEU	C	133	44.449	17.292	77.015	1.00 48.67	N
ATOM	14129	CA	LEU	C	133	45.591	17.140	76.156	1.00 47.27	C
ATOM	14131	CB	LEU	C	133	45.366	16.031	75.159	1.00 46.70	C
ATOM	14134	CG	LEU	C	133	46.663	15.841	74.400	1.00 48.65	C
ATOM	14136	CD1	LEU	C	133	47.713	15.384	75.385	1.00 48.76	C
ATOM	14140	CD2	LEU	C	133	46.539	14.900	73.213	1.00 50.53	C
ATOM	14144	C	LEU	C	133	45.821	18.432	75.416	1.00 50.94	C
ATOM	14145	O	LEU	C	133	45.405	18.612	74.271	1.00 58.31	O
ATOM	14146	N	GLU	C	134	46.478	19.354	76.071	1.00 51.70	N
ATOM	14148	CA	GLU	C	134	46.764	20.626	75.441	1.00 56.18	C
ATOM	14150	CB	GLU	C	134	47.967	21.258	76.166	1.00 56.39	C
ATOM	14153	CG	GLU	C	134	48.225	22.746	75.938	1.00 59.32	C

ATOM	14156	CD	GLU	C	134	49.438	23.242	76.750	1.00	65.65	C
ATOM	14157	OE1	GLU	C	134	49.225	23.685	77.918	1.00	66.55	O
ATOM	14158	OE2	GLU	C	134	50.605	23.183	76.240	1.00	53.92	O
ATOM	14159	C	GLU	C	134	47.099	20.439	73.944	1.00	55.09	C
ATOM	14160	O	GLU	C	134	47.972	19.634	73.636	1.00	51.08	O
ATOM	14161	N	PRO	C	135	46.399	21.161	73.042	1.00	52.45	N
ATOM	14162	CA	PRO	C	135	46.789	21.308	71.624	1.00	47.35	C
ATOM	14164	CB	PRO	C	135	45.590	22.018	71.001	1.00	44.20	C
ATOM	14167	CG	PRO	C	135	44.524	21.918	71.952	1.00	43.96	C
ATOM	14170	CD	PRO	C	135	45.135	21.861	73.310	1.00	48.87	C
ATOM	14173	C	PRO	C	135	48.011	22.197	71.412	1.00	45.97	C
ATOM	14174	O	PRO	C	135	48.341	23.014	72.238	1.00	57.63	O
ATOM	14175	N	PHE	C	136	48.665	22.030	70.271	1.00	49.91	N
ATOM	14177	CA	PHE	C	136	49.918	22.693	69.912	1.00	41.68	C
ATOM	14179	CB	PHE	C	136	50.230	22.292	68.497	1.00	41.45	C
ATOM	14182	CG	PHE	C	136	51.358	23.034	67.882	1.00	41.29	C
ATOM	14183	CD1	PHE	C	136	52.621	22.527	67.912	1.00	37.45	C
ATOM	14185	CE1	PHE	C	136	53.646	23.172	67.368	1.00	39.54	C
ATOM	14187	CZ	PHE	C	136	53.450	24.324	66.769	1.00	46.69	C
ATOM	14189	CE2	PHE	C	136	52.202	24.861	66.706	1.00	47.06	C
ATOM	14191	CD2	PHE	C	136	51.152	24.216	67.266	1.00	44.15	C
ATOM	14193	C	PHE	C	136	49.917	24.200	69.976	1.00	48.49	C
ATOM	14194	O	PHE	C	136	50.837	24.807	70.537	1.00	57.13	O
ATOM	14195	N	PHE	C	137	48.902	24.838	69.403	1.00	50.04	N
ATOM	14197	CA	PHE	C	137	48.879	26.300	69.407	1.00	42.38	C
ATOM	14199	CB	PHE	C	137	47.751	26.868	68.559	1.00	43.63	C
ATOM	14202	CG	PHE	C	137	48.105	28.174	67.943	1.00	44.76	C
ATOM	14203	CD1	PHE	C	137	48.912	28.224	66.849	1.00	48.03	C
ATOM	14205	CE1	PHE	C	137	49.260	29.420	66.290	1.00	46.54	C
ATOM	14207	CZ	PHE	C	137	48.814	30.560	66.820	1.00	44.20	C
ATOM	14209	CE2	PHE	C	137	48.001	30.536	67.920	1.00	43.29	C
ATOM	14211	CD2	PHE	C	137	47.648	29.358	68.474	1.00	48.04	C
ATOM	14213	C	PHE	C	137	48.782	26.775	70.830	1.00	45.85	C
ATOM	14214	O	PHE	C	137	49.389	27.784	71.210	1.00	43.40	O
ATOM	14215	N	ASP	C	138	48.034	26.044	71.651	1.00	46.65	N
ATOM	14217	CA	ASP	C	138	47.918	26.481	73.024	1.00	48.49	C
ATOM	14219	CB	ASP	C	138	47.010	25.594	73.849	1.00	50.42	C
ATOM	14222	CG	ASP	C	138	45.550	25.771	73.523	1.00	56.72	C
ATOM	14223	OD1	ASP	C	138	44.771	26.066	74.459	1.00	57.59	O
ATOM	14224	OD2	ASP	C	138	45.080	25.619	72.372	1.00	63.56	O
ATOM	14225	C	ASP	C	138	49.321	26.472	73.611	1.00	49.79	C
ATOM	14226	O	ASP	C	138	49.664	27.377	74.366	1.00	50.18	O
ATOM	14227	N	SER	C	139	50.117	25.459	73.256	1.00	45.66	N
ATOM	14229	CA	SER	C	139	51.454	25.288	73.832	1.00	45.55	C
ATOM	14231	CB	SER	C	139	52.080	23.926	73.462	1.00	42.34	C
ATOM	14234	OG	SER	C	139	51.244	22.831	73.802	1.00	38.35	O
ATOM	14236	C	SER	C	139	52.359	26.358	73.325	1.00	45.80	C
ATOM	14237	O	SER	C	139	53.036	27.041	74.081	1.00	47.40	O
ATOM	14238	N	LEU	C	140	52.370	26.489	72.015	1.00	48.74	N
ATOM	14240	CA	LEU	C	140	53.222	27.467	71.365	1.00	50.72	C
ATOM	14242	CB	LEU	C	140	52.847	27.531	69.883	1.00	48.34	C
ATOM	14245	CG	LEU	C	140	53.654	28.505	69.064	1.00	46.32	C
ATOM	14247	CD1	LEU	C	140	55.129	28.109	69.092	1.00	49.60	C
ATOM	14251	CD2	LEU	C	140	53.172	28.519	67.687	1.00	46.89	C
ATOM	14255	C	LEU	C	140	53.041	28.841	72.010	1.00	51.24	C
ATOM	14256	O	LEU	C	140	53.989	29.558	72.257	1.00	55.86	O
ATOM	14257	N	VAL	C	141	51.801	29.205	72.274	1.00	53.08	N

ATOM	14259	CA	VAL	C	141	51.509	30.479	72.881	1.00	50.16	C
ATOM	14261	CB	VAL	C	141	50.019	30.804	72.750	1.00	51.99	C
ATOM	14263	CG1	VAL	C	141	49.547	31.794	73.812	1.00	48.59	C
ATOM	14267	CG2	VAL	C	141	49.751	31.368	71.362	1.00	55.31	C
ATOM	14271	C	VAL	C	141	51.899	30.512	74.324	1.00	52.53	C
ATOM	14272	O	VAL	C	141	52.264	31.575	74.817	1.00	56.14	O
ATOM	14273	N	LYS	C	142	51.828	29.375	75.019	1.00	54.25	N
ATOM	14275	CA	LYS	C	142	52.179	29.360	76.439	1.00	54.82	C
ATOM	14277	CB	LYS	C	142	51.575	28.156	77.211	1.00	59.67	C
ATOM	14280	CG	LYS	C	142	50.151	28.411	77.893	1.00	63.35	C
ATOM	14283	CD	LYS	C	142	49.565	27.179	78.677	1.00	63.97	C
ATOM	14286	CE	LYS	C	142	48.278	27.516	79.548	1.00	68.51	C
ATOM	14289	NZ	LYS	C	142	46.914	27.549	78.885	1.00	62.76	N
ATOM	14293	C	LYS	C	142	53.692	29.426	76.618	1.00	56.79	C
ATOM	14294	O	LYS	C	142	54.145	30.121	77.516	1.00	63.76	O
ATOM	14295	N	GLN	C	143	54.476	28.760	75.759	1.00	53.91	N
ATOM	14297	CA	GLN	C	143	55.943	28.662	75.943	1.00	47.91	C
ATOM	14299	CB	GLN	C	143	56.473	27.279	75.515	1.00	45.64	C
ATOM	14302	CG	GLN	C	143	55.935	26.091	76.354	1.00	47.12	C
ATOM	14305	CD	GLN	C	143	56.055	24.720	75.636	1.00	51.24	C
ATOM	14306	OE1	GLN	C	143	57.100	24.396	75.047	1.00	54.46	O
ATOM	14307	NE2	GLN	C	143	54.990	23.927	75.695	1.00	34.83	N
ATOM	14310	C	GLN	C	143	56.776	29.709	75.243	1.00	49.87	C
ATOM	14311	O	GLN	C	143	58.000	29.605	75.260	1.00	56.15	O
ATOM	14312	N	THR	C	144	56.162	30.720	74.638	1.00	53.26	N
ATOM	14314	CA	THR	C	144	56.945	31.754	73.943	1.00	54.99	C
ATOM	14316	CB	THR	C	144	57.314	31.208	72.592	1.00	55.67	C
ATOM	14318	OG1	THR	C	144	56.128	30.775	71.926	1.00	57.59	O
ATOM	14320	CG2	THR	C	144	58.014	29.924	72.739	1.00	56.90	C
ATOM	14324	C	THR	C	144	56.173	33.090	73.808	1.00	57.45	C
ATOM	14325	O	THR	C	144	55.095	33.229	74.379	1.00	57.38	O
ATOM	14326	N	HIS	C	145	56.689	34.072	73.066	1.00	57.24	N
ATOM	14328	CA	HIS	C	145	55.993	35.367	72.997	1.00	59.37	C
ATOM	14330	CB	HIS	C	145	56.995	36.521	73.119	1.00	62.64	C
ATOM	14333	CG	HIS	C	145	57.622	36.612	74.472	1.00	63.89	C
ATOM	14334	ND1	HIS	C	145	58.854	36.068	74.757	1.00	61.12	N
ATOM	14336	CE1	HIS	C	145	59.142	36.279	76.028	1.00	63.96	C
ATOM	14338	NE2	HIS	C	145	58.142	36.947	76.574	1.00	67.84	N
ATOM	14340	CD2	HIS	C	145	57.177	37.168	75.623	1.00	66.24	C
ATOM	14342	C	HIS	C	145	55.106	35.584	71.768	1.00	60.03	C
ATOM	14343	O	HIS	C	145	54.617	36.702	71.531	1.00	61.56	O
ATOM	14344	N	VAL	C	146	54.894	34.527	70.992	1.00	55.68	N
ATOM	14346	CA	VAL	C	146	54.037	34.612	69.813	1.00	52.16	C
ATOM	14348	CB	VAL	C	146	54.067	33.241	69.003	1.00	53.83	C
ATOM	14350	CG1	VAL	C	146	52.899	33.085	68.012	1.00	49.94	C
ATOM	14354	CG2	VAL	C	146	55.398	33.083	68.271	1.00	49.83	C
ATOM	14358	C	VAL	C	146	52.625	34.956	70.245	1.00	41.58	C
ATOM	14359	O	VAL	C	146	52.071	34.277	71.047	1.00	45.36	O
ATOM	14360	N	PRO	C	147	52.072	36.026	69.721	1.00	38.73	N
ATOM	14361	CA	PRO	C	147	50.672	36.434	69.934	1.00	44.65	C
ATOM	14363	CB	PRO	C	147	50.485	37.592	68.946	1.00	47.94	C
ATOM	14366	CG	PRO	C	147	51.856	38.095	68.590	1.00	46.22	C
ATOM	14369	CD	PRO	C	147	52.799	36.961	68.863	1.00	48.16	C
ATOM	14372	C	PRO	C	147	49.667	35.353	69.590	1.00	43.63	C
ATOM	14373	O	PRO	C	147	49.987	34.428	68.854	1.00	49.34	O
ATOM	14374	N	ASN	C	148	48.446	35.451	70.075	1.00	44.57	N
ATOM	14376	CA	ASN	C	148	47.568	34.263	69.982	1.00	43.03	C

ATOM	14378	CB	ASN	C	148	46.660	34.109	71.201	1.00	38.71	C
ATOM	14381	CG	ASN	C	148	46.009	32.750	71.245	1.00	40.63	C
ATOM	14382	OD1	ASN	C	148	46.577	31.792	70.748	1.00	45.67	O
ATOM	14383	ND2	ASN	C	148	44.812	32.656	71.820	1.00	35.19	N
ATOM	14386	C	ASN	C	148	46.739	34.377	68.792	1.00	44.54	C
ATOM	14387	O	ASN	C	148	45.575	34.746	68.884	1.00	47.35	O
ATOM	14388	N	LEU	C	149	47.324	34.076	67.649	1.00	47.80	N
ATOM	14390	CA	LEU	C	149	46.625	34.355	66.423	1.00	46.06	C
ATOM	14392	CB	LEU	C	149	46.483	35.861	66.342	1.00	45.20	C
ATOM	14395	CG	LEU	C	149	46.167	36.389	64.967	1.00	50.04	C
ATOM	14397	CD1	LEU	C	149	45.789	37.837	65.045	1.00	50.52	C
ATOM	14401	CD2	LEU	C	149	47.368	36.220	64.121	1.00	54.10	C
ATOM	14405	C	LEU	C	149	47.370	33.856	65.209	1.00	45.78	C
ATOM	14406	O	LEU	C	149	48.588	34.024	65.101	1.00	48.36	O
ATOM	14407	N	PHE	C	150	46.639	33.241	64.289	1.00	42.18	N
ATOM	14409	CA	PHE	C	150	47.225	32.795	63.036	1.00	42.43	C
ATOM	14411	CB	PHE	C	150	47.534	31.231	62.984	1.00	40.98	C
ATOM	14414	CG	PHE	C	150	46.314	30.306	63.059	1.00	41.37	C
ATOM	14415	CD1	PHE	C	150	45.783	29.924	64.283	1.00	46.98	C
ATOM	14417	CE1	PHE	C	150	44.679	29.090	64.352	1.00	40.05	C
ATOM	14419	CZ	PHE	C	150	44.101	28.628	63.198	1.00	39.23	C
ATOM	14421	CE2	PHE	C	150	44.615	28.977	61.978	1.00	32.22	C
ATOM	14423	CD2	PHE	C	150	45.719	29.814	61.905	1.00	32.36	C
ATOM	14425	C	PHE	C	150	46.286	33.330	61.950	1.00	43.38	C
ATOM	14426	O	PHE	C	150	45.167	33.745	62.233	1.00	48.71	O
ATOM	14427	N	SER	C	151	46.759	33.329	60.720	1.00	43.07	N
ATOM	14429	CA	SER	C	151	45.981	33.763	59.606	1.00	37.49	C
ATOM	14431	CB	SER	C	151	46.225	35.259	59.423	1.00	44.33	C
ATOM	14434	OG	SER	C	151	47.595	35.588	59.289	1.00	42.06	O
ATOM	14436	C	SER	C	151	46.397	32.934	58.389	1.00	38.78	C
ATOM	14437	O	SER	C	151	47.577	32.606	58.234	1.00	36.44	O
ATOM	14438	N	LEU	C	152	45.452	32.580	57.516	1.00	41.13	N
ATOM	14440	CA	LEU	C	152	45.758	31.690	56.363	1.00	40.11	C
ATOM	14442	CB	LEU	C	152	45.085	30.324	56.518	1.00	35.95	C
ATOM	14445	CG	LEU	C	152	45.415	29.520	57.772	1.00	36.57	C
ATOM	14447	CD1	LEU	C	152	44.398	28.489	58.070	1.00	35.32	C
ATOM	14451	CD2	LEU	C	152	46.772	28.820	57.620	1.00	44.22	C
ATOM	14455	C	LEU	C	152	45.330	32.288	55.023	1.00	41.15	C
ATOM	14456	O	LEU	C	152	44.319	32.983	54.936	1.00	46.18	O
ATOM	14457	N	GLN	C	153	46.133	32.001	54.003	1.00	40.76	N
ATOM	14459	CA	GLN	C	153	45.914	32.418	52.632	1.00	36.05	C
ATOM	14461	CB	GLN	C	153	46.847	33.554	52.203	1.00	39.58	C
ATOM	14464	CG	GLN	C	153	46.387	34.255	50.905	1.00	46.24	C
ATOM	14467	CD	GLN	C	153	47.443	35.042	50.160	1.00	49.21	C
ATOM	14468	OE1	GLN	C	153	48.484	34.518	49.827	1.00	61.46	O
ATOM	14469	NE2	GLN	C	153	47.155	36.304	49.870	1.00	57.83	N
ATOM	14472	C	GLN	C	153	46.244	31.195	51.809	1.00	34.15	C
ATOM	14473	O	GLN	C	153	47.396	30.910	51.599	1.00	34.22	O
ATOM	14474	N	LEU	C	154	45.219	30.487	51.348	1.00	36.48	N
ATOM	14476	CA	LEU	C	154	45.351	29.289	50.558	1.00	34.16	C
ATOM	14478	CB	LEU	C	154	44.251	28.339	50.981	1.00	35.94	C
ATOM	14481	CG	LEU	C	154	44.128	27.928	52.434	1.00	28.19	C
ATOM	14483	CD1	LEU	C	154	43.246	26.789	52.499	1.00	34.51	C
ATOM	14487	CD2	LEU	C	154	45.441	27.455	52.858	1.00	41.55	C
ATOM	14491	C	LEU	C	154	45.144	29.591	49.075	1.00	41.40	C
ATOM	14492	O	LEU	C	154	44.050	29.970	48.695	1.00	47.72	O
ATOM	14493	N	CYS	C	155	46.150	29.419	48.214	1.00	49.18	N

ATOM	14495	CA	CYS	C	155	45.953	29.761	46.804	1.00	56.83	C
ATOM	14497	CB	CYS	C	155	47.143	30.559	46.285	1.00	59.70	C
ATOM	14500	SG	CYS	C	155	47.453	32.045	47.258	1.00	65.72	S
ATOM	14501	C	CYS	C	155	45.685	28.565	45.895	1.00	59.52	C
ATOM	14502	O	CYS	C	155	46.576	27.824	45.515	1.00	59.33	O
ATOM	14503	N	GLY	C	156	44.433	28.358	45.538	1.00	66.70	N
ATOM	14505	CA	GLY	C	156	44.157	27.304	44.582	1.00	69.05	C
ATOM	14508	C	GLY	C	156	44.971	27.693	43.359	1.00	71.96	C
ATOM	14509	O	GLY	C	156	45.119	28.899	43.050	1.00	71.30	O
ATOM	14510	N	ALA	C	157	45.508	26.710	42.655	1.00	71.91	N
ATOM	14512	CA	ALA	C	157	46.331	27.044	41.517	1.00	75.82	C
ATOM	14514	CB	ALA	C	157	47.022	25.831	40.962	1.00	75.63	C
ATOM	14518	C	ALA	C	157	45.458	27.645	40.467	1.00	79.16	C
ATOM	14519	O	ALA	C	157	45.896	28.525	39.731	1.00	85.18	O
ATOM	14520	N	GLY	C	158	44.215	27.185	40.402	1.00	81.03	N
ATOM	14522	CA	GLY	C	158	43.361	27.576	39.309	1.00	82.68	C
ATOM	14525	C	GLY	C	158	43.851	26.802	38.095	1.00	86.22	C
ATOM	14526	O	GLY	C	158	43.962	27.338	36.995	1.00	88.16	O
ATOM	14527	N	PHE	C	159	44.180	25.537	38.355	1.00	89.75	N
ATOM	14529	CA	PHE	C	159	44.445	24.472	37.374	1.00	92.50	C
ATOM	14531	CB	PHE	C	159	45.328	24.878	36.180	1.00	92.91	C
ATOM	14534	CG	PHE	C	159	46.710	25.287	36.552	1.00	92.61	C
ATOM	14535	CD1	PHE	C	159	46.993	26.621	36.810	1.00	92.40	C
ATOM	14537	CE1	PHE	C	159	48.259	27.023	37.155	1.00	93.74	C
ATOM	14539	CZ	PHE	C	159	49.284	26.084	37.244	1.00	96.27	C
ATOM	14541	CE2	PHE	C	159	49.017	24.741	36.984	1.00	95.81	C
ATOM	14543	CD2	PHE	C	159	47.728	24.349	36.637	1.00	93.97	C
ATOM	14545	C	PHE	C	159	45.035	23.300	38.180	1.00	94.38	C
ATOM	14546	O	PHE	C	159	45.615	23.503	39.255	1.00	93.80	O
ATOM	14547	N	PRO	C	160	44.868	22.076	37.689	1.00	95.18	N
ATOM	14548	CA	PRO	C	160	45.344	20.917	38.441	1.00	96.99	C
ATOM	14550	CB	PRO	C	160	44.632	19.747	37.789	1.00	95.07	C
ATOM	14553	CG	PRO	C	160	44.282	20.215	36.425	1.00	96.10	C
ATOM	14556	CD	PRO	C	160	44.225	21.697	36.420	1.00	94.57	C
ATOM	14559	C	PRO	C	160	46.848	20.733	38.357	1.00	101.28	C
ATOM	14560	O	PRO	C	160	47.540	21.320	37.505	1.00	104.32	O
ATOM	14561	N	LEU	C	161	47.336	19.898	39.267	1.00	100.82	N
ATOM	14563	CA	LEU	C	161	48.746	19.635	39.405	1.00	99.81	C
ATOM	14565	CB	LEU	C	161	49.268	20.480	40.590	1.00	100.38	C
ATOM	14568	CG	LEU	C	161	48.819	21.960	40.588	1.00	99.66	C
ATOM	14570	CD1	LEU	C	161	48.883	22.650	41.957	1.00	99.34	C
ATOM	14574	CD2	LEU	C	161	49.626	22.753	39.569	1.00	100.10	C
ATOM	14578	C	LEU	C	161	48.937	18.131	39.659	1.00	98.91	C
ATOM	14579	O	LEU	C	161	47.989	17.432	40.017	1.00	98.25	O
ATOM	14580	N	GLN	C	162	50.146	17.628	39.438	1.00	97.30	N
ATOM	14582	CA	GLN	C	162	50.499	16.289	39.903	1.00	98.52	C
ATOM	14584	CB	GLN	C	162	51.168	15.442	38.827	1.00	97.42	C
ATOM	14587	CG	GLN	C	162	50.212	14.825	37.822	1.00	98.06	C
ATOM	14590	CD	GLN	C	162	50.951	14.249	36.621	1.00	96.41	C
ATOM	14591	OE1	GLN	C	162	50.338	13.886	35.623	1.00	92.89	O
ATOM	14592	NE2	GLN	C	162	52.277	14.173	36.721	1.00	95.15	N
ATOM	14595	C	GLN	C	162	51.457	16.426	41.087	1.00	98.47	C
ATOM	14596	O	GLN	C	162	52.087	17.468	41.294	1.00	97.73	O
ATOM	14597	N	GLN	C	163	51.559	15.352	41.853	1.00	97.05	N
ATOM	14599	CA	GLN	C	163	52.407	15.302	43.033	1.00	96.01	C
ATOM	14601	CB	GLN	C	163	52.669	13.818	43.343	1.00	95.60	C
ATOM	14604	CG	GLN	C	163	54.092	13.337	43.578	1.00	95.45	C

ATOM	14607	CD	GLN	C	163	54.107	11.824	43.872	1.00	94.18	C
ATOM	14608	OE1	GLN	C	163	54.023	11.003	42.956	1.00	91.93	O
ATOM	14609	NE2	GLN	C	163	54.188	11.466	45.149	1.00	93.72	N
ATOM	14612	C	GLN	C	163	53.681	16.191	42.973	1.00	95.28	C
ATOM	14613	O	GLN	C	163	53.880	17.037	43.854	1.00	95.34	O
ATOM	14614	N	SER	C	164	54.528	16.041	41.956	1.00	93.34	N
ATOM	14616	CA	SER	C	164	55.762	16.838	41.910	1.00	93.19	C
ATOM	14618	CB	SER	C	164	56.730	16.336	40.832	1.00	92.70	C
ATOM	14621	OG	SER	C	164	57.775	15.565	41.411	1.00	87.37	O
ATOM	14623	C	SER	C	164	55.478	18.324	41.720	1.00	94.82	C
ATOM	14624	O	SER	C	164	56.259	19.174	42.150	1.00	95.13	O
ATOM	14625	N	GLU	C	165	54.359	18.628	41.072	1.00	98.53	N
ATOM	14627	CA	GLU	C	165	53.948	20.013	40.853	1.00	99.60	C
ATOM	14629	CB	GLU	C	165	52.680	20.077	39.996	1.00	98.79	C
ATOM	14632	CG	GLU	C	165	52.859	19.545	38.582	1.00	98.44	C
ATOM	14635	CD	GLU	C	165	51.602	19.706	37.754	1.00	99.73	C
ATOM	14636	OE1	GLU	C	165	51.122	20.853	37.657	1.00	100.81	O
ATOM	14637	OE2	GLU	C	165	51.086	18.693	37.213	1.00	99.63	O
ATOM	14638	C	GLU	C	165	53.728	20.700	42.197	1.00	100.08	C
ATOM	14639	O	GLU	C	165	54.080	21.873	42.375	1.00	100.95	O
ATOM	14640	N	VAL	C	166	53.143	19.958	43.136	1.00	100.04	N
ATOM	14642	CA	VAL	C	166	52.950	20.446	44.504	1.00	99.34	C
ATOM	14644	CB	VAL	C	166	52.142	19.435	45.372	1.00	98.17	C
ATOM	14646	CG1	VAL	C	166	52.900	19.049	46.665	1.00	95.99	C
ATOM	14650	CG2	VAL	C	166	50.743	19.987	45.665	1.00	93.72	C
ATOM	14654	C	VAL	C	166	54.307	20.701	45.142	1.00	100.09	C
ATOM	14655	O	VAL	C	166	54.503	21.667	45.882	1.00	100.64	O
ATOM	14656	N	LEU	C	167	55.258	19.829	44.855	1.00	99.30	N
ATOM	14658	CA	LEU	C	167	56.547	20.023	45.434	1.00	97.76	C
ATOM	14660	CB	LEU	C	167	57.558	18.968	44.958	1.00	98.11	C
ATOM	14663	CG	LEU	C	167	57.227	17.539	45.438	1.00	99.43	C
ATOM	14665	CD1	LEU	C	167	58.481	16.676	45.639	1.00	97.68	C
ATOM	14669	CD2	LEU	C	167	56.393	17.554	46.730	1.00	97.95	C
ATOM	14673	C	LEU	C	167	56.977	21.424	45.079	1.00	96.62	C
ATOM	14674	O	LEU	C	167	57.027	22.301	45.938	1.00	97.39	O
ATOM	14675	N	ALA	C	168	57.253	21.650	43.805	1.00	94.46	N
ATOM	14677	CA	ALA	C	168	57.889	22.898	43.403	1.00	92.65	C
ATOM	14679	CB	ALA	C	168	58.323	22.800	41.943	1.00	92.92	C
ATOM	14683	C	ALA	C	168	57.082	24.191	43.654	1.00	91.29	C
ATOM	14684	O	ALA	C	168	57.666	25.209	44.025	1.00	89.06	O
ATOM	14685	N	SER	C	169	55.761	24.159	43.471	1.00	89.36	N
ATOM	14687	CA	SER	C	169	54.960	25.382	43.593	1.00	89.32	C
ATOM	14689	CB	SER	C	169	53.669	25.298	42.757	1.00	89.95	C
ATOM	14692	OG	SER	C	169	53.966	25.200	41.370	1.00	87.54	O
ATOM	14694	C	SER	C	169	54.652	25.754	45.046	1.00	87.23	C
ATOM	14695	O	SER	C	169	54.933	24.993	45.958	1.00	85.58	O
ATOM	14696	N	VAL	C	170	54.078	26.946	45.217	1.00	86.76	N
ATOM	14698	CA	VAL	C	170	53.776	27.562	46.512	1.00	83.54	C
ATOM	14700	CB	VAL	C	170	54.404	28.964	46.601	1.00	84.64	C
ATOM	14702	CG1	VAL	C	170	53.931	29.684	47.870	1.00	84.38	C
ATOM	14706	CG2	VAL	C	170	55.930	28.892	46.502	1.00	85.18	C
ATOM	14710	C	VAL	C	170	52.291	27.812	46.572	1.00	79.04	C
ATOM	14711	O	VAL	C	170	51.788	28.676	45.840	1.00	81.45	O
ATOM	14712	N	GLY	C	171	51.583	27.102	47.443	1.00	71.56	N
ATOM	14714	CA	GLY	C	171	50.128	27.173	47.448	1.00	64.22	C
ATOM	14717	C	GLY	C	171	49.495	27.867	48.630	1.00	54.08	C
ATOM	14718	O	GLY	C	171	48.314	27.778	48.813	1.00	54.31	O

ATOM	14719	N	GLY	C	172	50.254	28.553	49.450	1.00 45.40	N
ATOM	14721	CA	GLY	C	172	49.596	29.320	50.492	1.00 44.40	C
ATOM	14724	C	GLY	C	172	50.491	29.789	51.617	1.00 39.50	C
ATOM	14725	O	GLY	C	172	51.682	29.496	51.654	1.00 42.06	O
ATOM	14726	N	SER	C	173	49.917	30.513	52.555	1.00 33.35	N
ATOM	14728	CA	SER	C	173	50.723	30.976	53.651	1.00 39.63	C
ATOM	14730	CB	SER	C	173	51.106	32.475	53.530	1.00 36.22	C
ATOM	14733	OG	SER	C	173	51.885	32.763	52.392	1.00 39.70	O
ATOM	14735	C	SER	C	173	50.007	30.807	54.936	1.00 39.12	C
ATOM	14736	O	SER	C	173	48.860	31.214	55.043	1.00 45.16	O
ATOM	14737	N	MET	C	174	50.713	30.220	55.900	1.00 41.12	N
ATOM	14739	CA	MET	C	174	50.303	30.226	57.291	1.00 44.55	C
ATOM	14741	CB	MET	C	174	50.469	28.856	57.929	1.00 45.29	C
ATOM	14744	CG	MET	C	174	49.569	28.713	59.111	1.00 49.87	C
ATOM	14747	SD	MET	C	174	50.002	27.521	60.286	1.00 54.93	S
ATOM	14748	CE	MET	C	174	51.580	27.087	59.828	1.00 51.63	C
ATOM	14752	C	MET	C	174	51.198	31.220	58.045	1.00 43.36	C
ATOM	14753	O	MET	C	174	52.395	30.963	58.243	1.00 46.43	O
ATOM	14754	N	ILE	C	175	50.621	32.339	58.460	1.00 41.87	N
ATOM	14756	CA	ILE	C	175	51.342	33.356	59.222	1.00 41.16	C
ATOM	14758	CB	ILE	C	175	50.853	34.763	58.898	1.00 33.28	C
ATOM	14760	CG1	ILE	C	175	50.662	34.909	57.409	1.00 34.50	C
ATOM	14763	CD1	ILE	C	175	51.930	35.029	56.688	1.00 31.57	C
ATOM	14767	CG2	ILE	C	175	51.848	35.783	59.266	1.00 26.95	C
ATOM	14771	C	ILE	C	175	51.052	33.050	60.683	1.00 47.92	C
ATOM	14772	O	ILE	C	175	49.912	33.241	61.145	1.00 45.68	O
ATOM	14773	N	ILE	C	176	52.066	32.530	61.386	1.00 46.95	N
ATOM	14775	CA	ILE	C	176	51.953	32.289	62.810	1.00 46.06	C
ATOM	14777	CB	ILE	C	176	52.958	31.333	63.304	1.00 49.65	C
ATOM	14779	CG1	ILE	C	176	52.844	30.056	62.508	1.00 49.91	C
ATOM	14782	CD1	ILE	C	176	51.673	29.189	62.918	1.00 54.20	C
ATOM	14786	CG2	ILE	C	176	52.730	31.133	64.803	1.00 50.08	C
ATOM	14790	C	ILE	C	176	52.294	33.603	63.475	1.00 48.42	C
ATOM	14791	O	ILE	C	176	53.364	34.165	63.256	1.00 47.56	O
ATOM	14792	N	GLY	C	177	51.388	34.085	64.296	1.00 51.03	N
ATOM	14794	CA	GLY	C	177	51.639	35.267	65.073	1.00 49.29	C
ATOM	14797	C	GLY	C	177	51.067	36.536	64.513	1.00 49.22	C
ATOM	14798	O	GLY	C	177	51.328	37.590	65.060	1.00 50.25	O
ATOM	14799	N	GLY	C	178	50.297	36.517	63.436	1.00 52.12	N
ATOM	14801	CA	GLY	C	178	49.818	37.836	63.033	1.00 50.89	C
ATOM	14804	C	GLY	C	178	48.891	38.108	61.873	1.00 48.10	C
ATOM	14805	O	GLY	C	178	47.903	37.436	61.665	1.00 59.40	O
ATOM	14806	N	ILE	C	179	49.206	39.172	61.138	1.00 44.57	N
ATOM	14808	CA	ILE	C	179	48.455	39.544	59.927	1.00 44.27	C
ATOM	14810	CB	ILE	C	179	47.304	40.507	60.254	1.00 39.02	C
ATOM	14812	CG1	ILE	C	179	46.428	39.947	61.351	1.00 36.52	C
ATOM	14815	CD1	ILE	C	179	45.118	40.632	61.461	1.00 43.02	C
ATOM	14819	CG2	ILE	C	179	46.476	40.788	59.032	1.00 32.12	C
ATOM	14823	C	ILE	C	179	49.370	40.148	58.825	1.00 43.98	C
ATOM	14824	O	ILE	C	179	49.928	41.199	59.007	1.00 48.65	O
ATOM	14825	N	ASP	C	180	49.510	39.482	57.681	1.00 42.18	N
ATOM	14827	CA	ASP	C	180	50.325	40.046	56.639	1.00 39.96	C
ATOM	14829	CB	ASP	C	180	51.142	38.993	55.913	1.00 35.38	C
ATOM	14832	CG	ASP	C	180	52.216	39.643	55.073	1.00 43.62	C
ATOM	14833	OD1	ASP	C	180	53.415	39.527	55.436	1.00 41.41	O
ATOM	14834	OD2	ASP	C	180	51.932	40.337	54.049	1.00 50.13	O
ATOM	14835	C	ASP	C	180	49.596	40.945	55.639	1.00 37.85	C

ATOM	14836	O	ASP	C	180	48.805	40.506	54.799	1.00	48.70	O
ATOM	14837	N	HIS	C	181	49.887	42.219	55.721	1.00	40.62	N
ATOM	14839	CA	HIS	C	181	49.259	43.224	54.859	1.00	39.93	C
ATOM	14841	CB	HIS	C	181	49.838	44.602	55.142	1.00	42.24	C
ATOM	14844	CG	HIS	C	181	48.853	45.720	55.038	1.00	52.30	C
ATOM	14845	ND1	HIS	C	181	47.791	45.856	55.906	1.00	62.73	N
ATOM	14847	CE1	HIS	C	181	47.100	46.939	55.586	1.00	64.35	C
ATOM	14849	NE2	HIS	C	181	47.681	47.515	54.550	1.00	57.25	N
ATOM	14851	CD2	HIS	C	181	48.779	46.772	54.188	1.00	53.26	C
ATOM	14853	C	HIS	C	181	49.505	42.975	53.416	1.00	36.05	C
ATOM	14854	O	HIS	C	181	48.850	43.585	52.631	1.00	39.99	O
ATOM	14855	N	SER	C	182	50.433	42.117	53.008	1.00	32.07	N
ATOM	14857	CA	SER	C	182	50.575	41.978	51.568	1.00	31.16	C
ATOM	14859	CB	SER	C	182	51.990	41.690	51.146	1.00	28.15	C
ATOM	14862	OG	SER	C	182	52.281	40.358	51.488	1.00	36.39	O
ATOM	14864	C	SER	C	182	49.735	40.850	51.087	1.00	36.53	C
ATOM	14865	O	SER	C	182	49.785	40.488	49.903	1.00	33.95	O
ATOM	14866	N	LEU	C	183	48.945	40.264	51.970	1.00	36.48	N
ATOM	14868	CA	LEU	C	183	48.242	39.094	51.515	1.00	36.94	C
ATOM	14870	CB	LEU	C	183	48.284	38.048	52.585	1.00	35.90	C
ATOM	14873	CG	LEU	C	183	49.701	37.713	52.907	1.00	36.59	C
ATOM	14875	CD1	LEU	C	183	49.617	36.793	54.059	1.00	44.02	C
ATOM	14879	CD2	LEU	C	183	50.418	37.076	51.761	1.00	37.13	C
ATOM	14883	C	LEU	C	183	46.834	39.379	51.089	1.00	36.63	C
ATOM	14884	O	LEU	C	183	46.152	38.513	50.512	1.00	37.72	O
ATOM	14885	N	TYR	C	184	46.383	40.589	51.347	1.00	39.63	N
ATOM	14887	CA	TYR	C	184	45.003	40.926	50.997	1.00	41.01	C
ATOM	14889	CB	TYR	C	184	44.136	40.845	52.263	1.00	34.47	C
ATOM	14892	CG	TYR	C	184	44.423	41.814	53.399	1.00	30.49	C
ATOM	14893	CD1	TYR	C	184	45.456	41.627	54.266	1.00	32.99	C
ATOM	14895	CE1	TYR	C	184	45.680	42.482	55.285	1.00	35.85	C
ATOM	14897	CZ	TYR	C	184	44.853	43.570	55.459	1.00	39.95	C
ATOM	14898	OH	TYR	C	184	45.049	44.511	56.484	1.00	46.78	O
ATOM	14900	CE2	TYR	C	184	43.838	43.748	54.621	1.00	32.10	C
ATOM	14902	CD2	TYR	C	184	43.623	42.887	53.612	1.00	33.46	C
ATOM	14904	C	TYR	C	184	44.845	42.263	50.216	1.00	43.54	C
ATOM	14905	O	TYR	C	184	45.836	42.918	49.891	1.00	47.52	O
ATOM	14906	N	THR	C	185	43.609	42.626	49.881	1.00	45.07	N
ATOM	14908	CA	THR	C	185	43.280	43.968	49.381	1.00	47.09	C
ATOM	14910	CB	THR	C	185	43.121	44.018	47.889	1.00	48.22	C
ATOM	14912	OG1	THR	C	185	42.287	42.924	47.447	1.00	52.14	O
ATOM	14914	CG2	THR	C	185	44.474	43.823	47.207	1.00	48.12	C
ATOM	14918	C	THR	C	185	41.961	44.331	50.010	1.00	45.23	C
ATOM	14919	O	THR	C	185	41.187	43.469	50.313	1.00	51.13	O
ATOM	14920	N	GLY	C	186	41.706	45.605	50.205	1.00	49.66	N
ATOM	14922	CA	GLY	C	186	40.476	46.065	50.831	1.00	48.30	C
ATOM	14925	C	GLY	C	186	40.560	45.905	52.325	1.00	48.55	C
ATOM	14926	O	GLY	C	186	41.655	45.707	52.842	1.00	47.91	O
ATOM	14927	N	SER	C	187	39.396	45.958	52.981	1.00	50.74	N
ATOM	14929	CA	SER	C	187	39.240	45.868	54.440	1.00	52.59	C
ATOM	14931	CB	SER	C	187	38.165	46.874	54.835	1.00	52.84	C
ATOM	14934	OG	SER	C	187	38.765	48.164	54.996	1.00	64.09	O
ATOM	14936	C	SER	C	187	38.900	44.491	55.071	1.00	51.13	C
ATOM	14937	O	SER	C	187	38.078	43.735	54.553	1.00	58.59	O
ATOM	14938	N	LEU	C	188	39.517	44.167	56.197	1.00	44.76	N
ATOM	14940	CA	LEU	C	188	39.192	42.925	56.896	1.00	44.33	C
ATOM	14942	CB	LEU	C	188	40.202	42.617	57.992	1.00	39.50	C

ATOM	14945	CG	LEU	C	188	41.507	41.917	57.677	1.00 40.78	C
ATOM	14947	CD1	LEU	C	188	42.459	42.055	58.880	1.00 40.19	C
ATOM	14951	CD2	LEU	C	188	41.258	40.443	57.322	1.00 36.35	C
ATOM	14955	C	LEU	C	188	37.879	43.128	57.610	1.00 48.87	C
ATOM	14956	O	LEU	C	188	37.694	44.169	58.250	1.00 48.46	O
ATOM	14957	N	TRP	C	189	36.971	42.152	57.523	1.00 50.27	N
ATOM	14959	CA	TRP	C	189	35.720	42.206	58.282	1.00 46.66	C
ATOM	14961	CB	TRP	C	189	34.526	42.094	57.365	1.00 49.51	C
ATOM	14964	CG	TRP	C	189	34.218	43.331	56.642	1.00 46.43	C
ATOM	14965	CD1	TRP	C	189	34.767	43.747	55.472	1.00 50.14	C
ATOM	14967	NE1	TRP	C	189	34.226	44.953	55.103	1.00 45.63	N
ATOM	14969	CE2	TRP	C	189	33.316	45.334	56.048	1.00 42.21	C
ATOM	14970	CD2	TRP	C	189	33.282	44.328	57.024	1.00 46.72	C
ATOM	14971	CE3	TRP	C	189	32.415	44.487	58.110	1.00 51.29	C
ATOM	14973	CZ3	TRP	C	189	31.629	45.612	58.171	1.00 45.32	C
ATOM	14975	CH2	TRP	C	189	31.691	46.580	57.183	1.00 43.31	C
ATOM	14977	CZ2	TRP	C	189	32.530	46.459	56.118	1.00 40.90	C
ATOM	14979	C	TRP	C	189	35.739	41.024	59.234	1.00 47.48	C
ATOM	14980	O	TRP	C	189	36.164	39.955	58.850	1.00 52.47	O
ATOM	14981	N	TYR	C	190	35.285	41.212	60.466	1.00 47.80	N
ATOM	14983	CA	TYR	C	190	35.345	40.164	61.477	1.00 49.62	C
ATOM	14985	CB	TYR	C	190	36.104	40.623	62.725	1.00 51.24	C
ATOM	14988	CG	TYR	C	190	37.569	40.940	62.541	1.00 54.91	C
ATOM	14989	CD1	TYR	C	190	37.958	42.213	62.201	1.00 54.91	C
ATOM	14991	CE1	TYR	C	190	39.281	42.539	62.037	1.00 55.50	C
ATOM	14993	CZ	TYR	C	190	40.257	41.593	62.212	1.00 60.48	C
ATOM	14994	OH	TYR	C	190	41.560	42.025	62.025	1.00 63.65	O
ATOM	14996	CE2	TYR	C	190	39.909	40.309	62.557	1.00 54.45	C
ATOM	14998	CD2	TYR	C	190	38.560	39.991	62.724	1.00 51.81	C
ATOM	15000	C	TYR	C	190	33.974	39.656	61.943	1.00 50.65	C
ATOM	15001	O	TYR	C	190	33.088	40.459	62.254	1.00 48.81	O
ATOM	15002	N	THR	C	191	33.820	38.322	61.995	1.00 48.48	N
ATOM	15004	CA	THR	C	191	32.600	37.689	62.484	1.00 45.23	C
ATOM	15006	CB	THR	C	191	32.090	36.647	61.492	1.00 43.53	C
ATOM	15008	OG1	THR	C	191	30.809	36.160	61.917	1.00 47.87	O
ATOM	15010	CG2	THR	C	191	32.973	35.419	61.505	1.00 47.43	C
ATOM	15014	C	THR	C	191	33.009	37.017	63.775	1.00 43.55	C
ATOM	15015	O	THR	C	191	34.143	36.540	63.858	1.00 46.67	O
ATOM	15016	N	PRO	C	192	32.125	36.948	64.774	1.00 43.58	N
ATOM	15017	CA	PRO	C	192	32.486	36.382	66.084	1.00 40.68	C
ATOM	15019	CB	PRO	C	192	31.334	36.786	66.980	1.00 35.99	C
ATOM	15022	CG	PRO	C	192	30.531	37.704	66.212	1.00 39.36	C
ATOM	15025	CD	PRO	C	192	30.718	37.376	64.766	1.00 43.30	C
ATOM	15028	C	PRO	C	192	32.515	34.907	66.109	1.00 42.65	C
ATOM	15029	O	PRO	C	192	31.684	34.307	65.446	1.00 46.37	O
ATOM	15030	N	ILE	C	193	33.444	34.335	66.868	1.00 49.91	N
ATOM	15032	CA	ILE	C	193	33.504	32.886	67.059	1.00 49.57	C
ATOM	15034	CB	ILE	C	193	34.897	32.436	67.468	1.00 51.07	C
ATOM	15036	CG1	ILE	C	193	35.908	32.688	66.353	1.00 48.43	C
ATOM	15039	CD1	ILE	C	193	37.370	32.489	66.806	1.00 45.97	C
ATOM	15043	CG2	ILE	C	193	34.900	30.990	67.792	1.00 52.95	C
ATOM	15047	C	ILE	C	193	32.481	32.601	68.140	1.00 49.00	C
ATOM	15048	O	ILE	C	193	32.546	33.112	69.244	1.00 53.60	O
ATOM	15049	N	ARG	C	194	31.515	31.789	67.788	1.00 51.30	N
ATOM	15051	CA	ARG	C	194	30.380	31.515	68.636	1.00 52.47	C
ATOM	15053	CB	ARG	C	194	29.397	30.664	67.867	1.00 50.52	C
ATOM	15056	CG	ARG	C	194	28.155	30.427	68.634	1.00 54.20	C

ATOM	15059	CD	ARG	C	194	27.064	29.819	67.810	1.00	52.92	C
ATOM	15062	NE	ARG	C	194	25.825	29.795	68.558	1.00	52.77	N
ATOM	15064	CZ	ARG	C	194	25.026	28.743	68.642	1.00	56.49	C
ATOM	15065	NH1	ARG	C	194	25.330	27.617	68.016	1.00	54.87	N
ATOM	15068	NH2	ARG	C	194	23.906	28.824	69.354	1.00	58.48	N
ATOM	15071	C	ARG	C	194	30.745	30.746	69.870	1.00	55.75	C
ATOM	15072	O	ARG	C	194	30.253	31.017	70.956	1.00	57.01	O
ATOM	15073	N	ARG	C	195	31.607	29.759	69.692	1.00	59.11	N
ATOM	15075	CA	ARG	C	195	31.973	28.902	70.790	1.00	59.31	C
ATOM	15077	CB	ARG	C	195	30.995	27.764	70.945	1.00	61.07	C
ATOM	15080	CG	ARG	C	195	30.821	27.418	72.392	1.00	64.46	C
ATOM	15083	CD	ARG	C	195	31.137	25.977	72.690	1.00	67.27	C
ATOM	15086	NE	ARG	C	195	30.142	25.083	72.128	1.00	66.30	N
ATOM	15088	CZ	ARG	C	195	30.096	23.795	72.352	1.00	63.54	C
ATOM	15089	NH1	ARG	C	195	31.012	23.226	73.136	1.00	67.84	N
ATOM	15092	NH2	ARG	C	195	29.136	23.080	71.786	1.00	58.10	N
ATOM	15095	C	ARG	C	195	33.311	28.328	70.540	1.00	57.13	C
ATOM	15096	O	ARG	C	195	33.657	28.010	69.409	1.00	57.63	O
ATOM	15097	N	GLU	C	196	34.064	28.179	71.614	1.00	55.49	N
ATOM	15099	CA	GLU	C	196	35.439	27.772	71.492	1.00	53.91	C
ATOM	15101	CB	GLU	C	196	36.266	28.390	72.627	1.00	54.10	C
ATOM	15104	CG	GLU	C	196	36.813	29.768	72.252	1.00	56.99	C
ATOM	15107	CD	GLU	C	196	37.389	30.542	73.417	1.00	54.97	C
ATOM	15108	OE1	GLU	C	196	37.947	29.924	74.327	1.00	59.03	O
ATOM	15109	OE2	GLU	C	196	37.278	31.777	73.422	1.00	62.18	O
ATOM	15110	C	GLU	C	196	35.569	26.287	71.468	1.00	49.41	C
ATOM	15111	O	GLU	C	196	35.832	25.689	72.484	1.00	58.38	O
ATOM	15112	N	TRP	C	197	35.365	25.689	70.307	1.00	44.54	N
ATOM	15114	CA	TRP	C	197	35.667	24.254	70.129	1.00	43.73	C
ATOM	15116	CB	TRP	C	197	34.518	23.348	70.471	1.00	44.23	C
ATOM	15119	CG	TRP	C	197	33.243	23.641	69.824	1.00	46.97	C
ATOM	15120	CD1	TRP	C	197	32.774	24.851	69.402	1.00	46.93	C
ATOM	15122	NE1	TRP	C	197	31.530	24.704	68.849	1.00	39.59	N
ATOM	15124	CE2	TRP	C	197	31.176	23.389	68.908	1.00	45.07	C
ATOM	15125	CD2	TRP	C	197	32.237	22.696	69.520	1.00	47.29	C
ATOM	15126	CE3	TRP	C	197	32.118	21.326	69.695	1.00	44.90	C
ATOM	15128	CZ3	TRP	C	197	30.950	20.707	69.265	1.00	46.40	C
ATOM	15130	CH2	TRP	C	197	29.924	21.419	68.674	1.00	43.73	C
ATOM	15132	CZ2	TRP	C	197	30.012	22.757	68.484	1.00	49.22	C
ATOM	15134	C	TRP	C	197	36.159	24.039	68.713	1.00	41.47	C
ATOM	15135	O	TRP	C	197	37.354	24.026	68.484	1.00	40.26	O
ATOM	15136	N	TYR	C	198	35.265	23.864	67.758	1.00	43.56	N
ATOM	15138	CA	TYR	C	198	35.681	24.018	66.375	1.00	45.02	C
ATOM	15140	CB	TYR	C	198	34.617	23.530	65.443	1.00	47.08	C
ATOM	15143	CG	TYR	C	198	34.364	22.060	65.493	1.00	46.30	C
ATOM	15144	CD1	TYR	C	198	35.062	21.207	64.639	1.00	44.86	C
ATOM	15146	CE1	TYR	C	198	34.843	19.877	64.651	1.00	43.00	C
ATOM	15148	CZ	TYR	C	198	33.911	19.347	65.520	1.00	41.88	C
ATOM	15149	OH	TYR	C	198	33.750	18.004	65.494	1.00	29.11	O
ATOM	15151	CE2	TYR	C	198	33.188	20.156	66.383	1.00	44.38	C
ATOM	15153	CD2	TYR	C	198	33.418	21.520	66.363	1.00	43.48	C
ATOM	15155	C	TYR	C	198	35.802	25.526	66.232	1.00	41.33	C
ATOM	15156	O	TYR	C	198	35.698	26.191	67.216	1.00	46.95	O
ATOM	15157	N	TYR	C	199	36.058	26.049	65.035	1.00	44.07	N
ATOM	15159	CA	TYR	C	199	36.047	27.504	64.759	1.00	42.83	C
ATOM	15161	CB	TYR	C	199	37.161	27.933	63.758	1.00	39.32	C
ATOM	15164	CG	TYR	C	199	38.494	28.044	64.448	1.00	37.70	C

ATOM	15165	CD1	TYR	C	199	39.421	27.041	64.346	1.00	40.50	C
ATOM	15167	CE1	TYR	C	199	40.637	27.114	65.007	1.00	42.66	C
ATOM	15169	CZ	TYR	C	199	40.932	28.211	65.793	1.00	44.12	C
ATOM	15170	OH	TYR	C	199	42.147	28.239	66.426	1.00	35.21	O
ATOM	15172	CE2	TYR	C	199	40.008	29.247	65.931	1.00	37.43	C
ATOM	15174	CD2	TYR	C	199	38.800	29.152	65.263	1.00	40.32	C
ATOM	15176	C	TYR	C	199	34.647	27.733	64.200	1.00	46.28	C
ATOM	15177	O	TYR	C	199	34.443	27.731	62.985	1.00	45.68	O
ATOM	15178	N	GLU	C	200	33.685	27.902	65.104	1.00	48.83	N
ATOM	15180	CA	GLU	C	200	32.273	27.958	64.746	1.00	49.81	C
ATOM	15182	CB	GLU	C	200	31.387	27.454	65.917	1.00	51.32	C
ATOM	15185	CG	GLU	C	200	29.895	27.584	65.613	1.00	55.33	C
ATOM	15188	CD	GLU	C	200	28.906	26.930	66.581	1.00	53.36	C
ATOM	15189	OE1	GLU	C	200	29.287	26.452	67.656	1.00	54.60	O
ATOM	15190	OE2	GLU	C	200	27.691	26.914	66.248	1.00	53.86	O
ATOM	15191	C	GLU	C	200	31.860	29.363	64.350	1.00	51.65	C
ATOM	15192	O	GLU	C	200	32.292	30.315	64.973	1.00	50.64	O
ATOM	15193	N	VAL	C	201	31.026	29.467	63.307	1.00	51.45	N
ATOM	15195	CA	VAL	C	201	30.461	30.724	62.832	1.00	46.63	C
ATOM	15197	CB	VAL	C	201	31.231	31.274	61.575	1.00	46.72	C
ATOM	15199	CG1	VAL	C	201	32.720	31.290	61.826	1.00	46.42	C
ATOM	15203	CG2	VAL	C	201	30.925	30.490	60.319	1.00	43.26	C
ATOM	15207	C	VAL	C	201	28.940	30.649	62.528	1.00	44.99	C
ATOM	15208	O	VAL	C	201	28.376	29.572	62.414	1.00	54.23	O
ATOM	15209	N	ILE	C	202	28.293	31.822	62.411	1.00	48.31	N
ATOM	15211	CA	ILE	C	202	26.856	31.919	62.056	1.00	42.18	C
ATOM	15213	CB	ILE	C	202	25.960	32.584	63.153	1.00	46.13	C
ATOM	15215	CG1	ILE	C	202	25.705	31.620	64.319	1.00	52.03	C
ATOM	15218	CD1	ILE	C	202	25.448	32.297	65.708	1.00	47.21	C
ATOM	15222	CG2	ILE	C	202	24.579	32.776	62.594	1.00	47.93	C
ATOM	15226	C	ILE	C	202	26.593	32.612	60.710	1.00	43.46	C
ATOM	15227	O	ILE	C	202	26.878	33.802	60.543	1.00	38.75	O
ATOM	15228	N	ILE	C	203	26.020	31.835	59.782	1.00	42.36	N
ATOM	15230	CA	ILE	C	203	25.653	32.266	58.452	1.00	38.42	C
ATOM	15232	CB	ILE	C	203	25.821	31.121	57.521	1.00	39.19	C
ATOM	15234	CG1	ILE	C	203	27.291	30.844	57.270	1.00	33.90	C
ATOM	15237	CD1	ILE	C	203	27.493	29.632	56.433	1.00	33.12	C
ATOM	15241	CG2	ILE	C	203	25.129	31.425	56.216	1.00	43.76	C
ATOM	15245	C	ILE	C	203	24.172	32.651	58.419	1.00	46.84	C
ATOM	15246	O	ILE	C	203	23.325	31.774	58.599	1.00	42.94	O
ATOM	15247	N	VAL	C	204	23.882	33.938	58.150	1.00	44.19	N
ATOM	15249	CA	VAL	C	204	22.544	34.494	58.261	1.00	40.88	C
ATOM	15251	CB	VAL	C	204	22.551	35.857	58.956	1.00	39.68	C
ATOM	15253	CG1	VAL	C	204	23.310	35.782	60.252	1.00	45.63	C
ATOM	15257	CG2	VAL	C	204	23.163	36.889	58.094	1.00	38.86	C
ATOM	15261	C	VAL	C	204	21.836	34.673	56.947	1.00	41.55	C
ATOM	15262	O	VAL	C	204	20.631	34.867	56.901	1.00	40.27	O
ATOM	15263	N	ARG	C	205	22.546	34.630	55.851	1.00	44.70	N
ATOM	15265	CA	ARG	C	205	21.813	34.671	54.594	1.00	43.15	C
ATOM	15267	CB	ARG	C	205	21.363	36.095	54.387	1.00	42.20	C
ATOM	15270	CG	ARG	C	205	20.722	36.355	53.055	1.00	45.65	C
ATOM	15273	CD	ARG	C	205	20.529	37.833	52.808	1.00	40.86	C
ATOM	15276	NE	ARG	C	205	20.356	38.095	51.406	1.00	43.85	N
ATOM	15278	CZ	ARG	C	205	19.209	38.492	50.860	1.00	56.25	C
ATOM	15279	NH1	ARG	C	205	18.138	38.663	51.623	1.00	49.46	N
ATOM	15282	NH2	ARG	C	205	19.131	38.724	49.538	1.00	59.23	N
ATOM	15285	C	ARG	C	205	22.634	34.130	53.409	1.00	42.48	C

ATOM	15286	O	ARG	C	205	23.813	34.449	53.284	1.00	41.99	O
ATOM	15287	N	VAL	C	206	22.026	33.317	52.550	1.00	40.52	N
ATOM	15289	CA	VAL	C	206	22.737	32.791	51.379	1.00	41.02	C
ATOM	15291	CB	VAL	C	206	22.927	31.279	51.471	1.00	40.59	C
ATOM	15293	CG1	VAL	C	206	23.317	30.696	50.129	1.00	42.15	C
ATOM	15297	CG2	VAL	C	206	24.031	30.961	52.462	1.00	41.87	C
ATOM	15301	C	VAL	C	206	22.034	33.153	50.075	1.00	43.12	C
ATOM	15302	O	VAL	C	206	20.813	33.046	49.996	1.00	47.55	O
ATOM	15303	N	GLU	C	207	22.806	33.595	49.065	1.00	44.82	N
ATOM	15305	CA	GLU	C	207	22.279	34.018	47.753	1.00	41.44	C
ATOM	15307	CB	GLU	C	207	22.430	35.512	47.568	1.00	41.47	C
ATOM	15310	CG	GLU	C	207	21.512	36.430	48.314	1.00	42.60	C
ATOM	15313	CD	GLU	C	207	22.035	37.856	48.249	1.00	50.19	C
ATOM	15314	OE1	GLU	C	207	22.821	38.160	47.296	1.00	52.39	O
ATOM	15315	OE2	GLU	C	207	21.679	38.666	49.147	1.00	46.64	O
ATOM	15316	C	GLU	C	207	23.034	33.399	46.566	1.00	41.75	C
ATOM	15317	O	GLU	C	207	24.211	33.080	46.689	1.00	36.68	O
ATOM	15318	N	ILE	C	208	22.342	33.253	45.423	1.00	40.80	N
ATOM	15320	CA	ILE	C	208	22.905	32.702	44.200	1.00	40.34	C
ATOM	15322	CB	ILE	C	208	22.245	31.408	43.864	1.00	39.20	C
ATOM	15324	CG1	ILE	C	208	22.071	30.557	45.096	1.00	40.09	C
ATOM	15327	CD1	ILE	C	208	23.285	29.762	45.470	1.00	40.99	C
ATOM	15331	CG2	ILE	C	208	23.075	30.663	42.809	1.00	43.38	C
ATOM	15335	C	ILE	C	208	22.593	33.697	43.111	1.00	42.32	C
ATOM	15336	O	ILE	C	208	21.440	33.839	42.734	1.00	52.77	O
ATOM	15337	N	ASN	C	209	23.622	34.358	42.581	1.00	46.89	N
ATOM	15339	CA	ASN	C	209	23.490	35.589	41.739	1.00	39.83	C
ATOM	15341	CB	ASN	C	209	23.200	35.302	40.256	1.00	34.52	C
ATOM	15344	CG	ASN	C	209	24.501	35.018	39.447	1.00	36.76	C
ATOM	15345	OD1	ASN	C	209	25.573	35.001	40.006	1.00	41.74	O
ATOM	15346	ND2	ASN	C	209	24.391	34.808	38.132	1.00	39.00	N
ATOM	15349	C	ASN	C	209	22.527	36.598	42.359	1.00	37.58	C
ATOM	15350	O	ASN	C	209	21.701	37.132	41.701	1.00	48.40	O
ATOM	15351	N	GLY	C	210	22.673	36.854	43.652	1.00	46.50	N
ATOM	15353	CA	GLY	C	210	21.882	37.848	44.370	1.00	41.31	C
ATOM	15356	C	GLY	C	210	20.518	37.398	44.884	1.00	41.24	C
ATOM	15357	O	GLY	C	210	19.844	38.161	45.549	1.00	37.25	O
ATOM	15358	N	GLN	C	211	20.113	36.163	44.594	1.00	46.35	N
ATOM	15360	CA	GLN	C	211	18.781	35.675	44.963	1.00	45.47	C
ATOM	15362	CB	GLN	C	211	18.262	34.732	43.882	1.00	49.01	C
ATOM	15365	CG	GLN	C	211	16.792	34.340	44.050	1.00	48.53	C
ATOM	15368	CD	GLN	C	211	16.314	33.366	42.969	1.00	52.21	C
ATOM	15369	OE1	GLN	C	211	17.113	32.799	42.237	1.00	59.52	O
ATOM	15370	NE2	GLN	C	211	15.007	33.168	42.882	1.00	62.94	N
ATOM	15373	C	GLN	C	211	18.784	34.920	46.237	1.00	44.55	C
ATOM	15374	O	GLN	C	211	19.593	34.039	46.396	1.00	47.96	O
ATOM	15375	N	ASP	C	212	17.866	35.263	47.137	1.00	47.82	N
ATOM	15377	CA	ASP	C	212	17.721	34.610	48.445	1.00	48.03	C
ATOM	15379	CB	ASP	C	212	16.568	35.289	49.184	1.00	46.60	C
ATOM	15382	CG	ASP	C	212	16.680	35.212	50.710	1.00	54.20	C
ATOM	15383	OD1	ASP	C	212	17.374	34.336	51.273	1.00	61.39	O
ATOM	15384	OD2	ASP	C	212	16.077	36.007	51.457	1.00	60.59	O
ATOM	15385	C	ASP	C	212	17.410	33.100	48.296	1.00	52.45	C
ATOM	15386	O	ASP	C	212	16.578	32.729	47.490	1.00	56.67	O
ATOM	15387	N	LEU	C	213	18.087	32.240	49.055	1.00	55.42	N
ATOM	15389	CA	LEU	C	213	17.742	30.820	49.133	1.00	56.97	C
ATOM	15391	CB	LEU	C	213	18.895	30.033	49.754	1.00	58.95	C

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ATOM  15394  CG  LEU C 213      19.416  28.788  49.047  1.00 59.16           C
ATOM  15396  CD1 LEU C 213      20.101  29.126  47.742  1.00 63.01           C
ATOM  15400  CD2 LEU C 213      20.399  28.127  49.943  1.00 60.50           C
ATOM  15404  C   LEU C 213      16.458  30.806  50.017  1.00 62.07           C
ATOM  15405  O   LEU C 213      15.551  29.957  49.888  1.00 61.04           O
ATOM  15406  N   LYS C 214      16.396  31.769  50.929  1.00 63.07           N
ATOM  15408  CA  LYS C 214      15.125  32.134  51.531  1.00 65.72           C
ATOM  15410  CB  LYS C 214      14.086  32.338  50.413  1.00 68.54           C
ATOM  15413  CG  LYS C 214      13.163  33.531  50.668  1.00 73.60           C
ATOM  15416  CD  LYS C 214      11.780  33.375  50.049  1.00 77.37           C
ATOM  15419  CE  LYS C 214      10.778  34.279  50.782  1.00 80.25           C
ATOM  15422  NZ  LYS C 214       9.511  34.543  49.997  1.00 81.27           N
ATOM  15426  C   LYS C 214      14.595  31.119  52.502  1.00 65.65           C
ATOM  15427  O   LYS C 214      13.379  30.934  52.638  1.00 66.01           O
ATOM  15428  N   MET C 215      15.509  30.463  53.188  1.00 63.58           N
ATOM  15430  CA  MET C 215      15.135  29.471  54.158  1.00 61.94           C
ATOM  15432  CB  MET C 215      16.070  28.284  53.990  1.00 61.98           C
ATOM  15435  CG  MET C 215      15.962  27.721  52.571  1.00 65.30           C
ATOM  15438  SD  MET C 215      17.057  26.390  52.158  1.00 66.94           S
ATOM  15439  CE  MET C 215      17.630  26.053  53.654  1.00 69.99           C
ATOM  15443  C   MET C 215      15.206  30.067  55.558  1.00 61.53           C
ATOM  15444  O   MET C 215      15.628  31.208  55.733  1.00 62.98           O
ATOM  15445  N   ASP C 216      14.770  29.312  56.552  1.00 59.98           N
ATOM  15447  CA  ASP C 216      14.984  29.732  57.917  1.00 63.83           C
ATOM  15449  CB  ASP C 216      14.421  28.723  58.910  1.00 63.59           C
ATOM  15452  CG  ASP C 216      14.491  29.219  60.341  1.00 63.16           C
ATOM  15453  OD1 ASP C 216      15.548  29.759  60.739  1.00 69.24           O
ATOM  15454  OD2 ASP C 216      13.541  29.119  61.139  1.00 58.32           O
ATOM  15455  C   ASP C 216      16.489  29.813  58.110  1.00 67.41           C
ATOM  15456  O   ASP C 216      17.241  28.950  57.662  1.00 70.90           O
ATOM  15457  N   CYS C 217      16.938  30.845  58.787  1.00 68.15           N
ATOM  15459  CA  CYS C 217      18.351  31.024  58.969  1.00 72.70           C
ATOM  15461  CB  CYS C 217      18.529  32.328  59.712  1.00 74.24           C
ATOM  15464  SG  CYS C 217      18.246  32.242  61.449  1.00 86.77           S
ATOM  15465  C   CYS C 217      19.059  29.819  59.668  1.00 71.10           C
ATOM  15466  O   CYS C 217      20.134  29.351  59.235  1.00 66.77           O
ATOM  15467  N   LYS C 218      18.447  29.314  60.736  1.00 70.12           N
ATOM  15469  CA  LYS C 218      18.971  28.156  61.466  1.00 67.64           C
ATOM  15471  CB  LYS C 218      17.922  27.688  62.483  1.00 67.20           C
ATOM  15474  CG  LYS C 218      17.853  28.475  63.795  1.00 70.89           C
ATOM  15477  CD  LYS C 218      17.000  27.722  64.838  1.00 73.15           C
ATOM  15480  CE  LYS C 218      16.593  28.602  66.030  1.00 74.74           C
ATOM  15483  NZ  LYS C 218      15.949  29.917  65.624  1.00 73.64           N
ATOM  15487  C   LYS C 218      19.318  26.997  60.515  1.00 63.47           C
ATOM  15488  O   LYS C 218      20.271  26.234  60.716  1.00 60.95           O
ATOM  15489  N   GLU C 219      18.540  26.865  59.462  1.00 60.07           N
ATOM  15491  CA  GLU C 219      18.752  25.751  58.582  1.00 60.47           C
ATOM  15493  CB  GLU C 219      17.606  25.606  57.552  1.00 61.66           C
ATOM  15496  CG  GLU C 219      16.924  24.226  57.549  1.00 68.73           C
ATOM  15499  CD  GLU C 219      15.776  24.058  58.574  1.00 79.28           C
ATOM  15500  OE1 GLU C 219      14.678  24.678  58.418  1.00 80.66           O
ATOM  15501  OE2 GLU C 219      15.962  23.280  59.549  1.00 81.82           O
ATOM  15502  C   GLU C 219      20.130  25.899  57.963  1.00 56.72           C
ATOM  15503  O   GLU C 219      20.748  24.903  57.588  1.00 59.58           O
ATOM  15504  N   TYR C 220      20.643  27.126  57.870  1.00 56.94           N
ATOM  15506  CA  TYR C 220      22.003  27.337  57.313  1.00 51.25           C
ATOM  15508  CB  TYR C 220      22.231  28.803  56.908  1.00 50.12           C
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ATOM	15511	CG	TYR	C	220	21.253	29.350	55.891	1.00	51.08	C
ATOM	15512	CD1	TYR	C	220	20.657	30.589	56.072	1.00	52.25	C
ATOM	15514	CE1	TYR	C	220	19.758	31.101	55.142	1.00	50.67	C
ATOM	15516	CZ	TYR	C	220	19.460	30.362	54.028	1.00	48.80	C
ATOM	15517	OH	TYR	C	220	18.584	30.861	53.123	1.00	54.70	O
ATOM	15519	CE2	TYR	C	220	20.029	29.140	53.811	1.00	47.32	C
ATOM	15521	CD2	TYR	C	220	20.927	28.634	54.741	1.00	53.35	C
ATOM	15523	C	TYR	C	220	23.106	26.890	58.295	1.00	50.69	C
ATOM	15524	O	TYR	C	220	24.252	26.689	57.913	1.00	49.00	O
ATOM	15525	N	ASN	C	221	22.780	26.754	59.569	1.00	50.57	N
ATOM	15527	CA	ASN	C	221	23.770	26.262	60.506	1.00	55.15	C
ATOM	15529	CB	ASN	C	221	24.208	27.421	61.384	1.00	55.72	C
ATOM	15532	CG	ASN	C	221	24.244	28.687	60.624	1.00	58.30	C
ATOM	15533	OD1	ASN	C	221	25.274	29.062	60.045	1.00	61.72	O
ATOM	15534	ND2	ASN	C	221	23.104	29.357	60.582	1.00	60.35	N
ATOM	15537	C	ASN	C	221	23.219	25.081	61.310	1.00	55.63	C
ATOM	15538	O	ASN	C	221	23.444	24.978	62.517	1.00	53.22	O
ATOM	15539	N	TYR	C	222	22.510	24.188	60.627	1.00	55.35	N
ATOM	15541	CA	TYR	C	222	21.764	23.173	61.334	1.00	55.70	C
ATOM	15543	CB	TYR	C	222	20.643	22.579	60.521	1.00	59.55	C
ATOM	15546	CG	TYR	C	222	20.139	21.358	61.212	1.00	63.51	C
ATOM	15547	CD1	TYR	C	222	19.875	21.375	62.578	1.00	65.98	C
ATOM	15549	CE1	TYR	C	222	19.414	20.235	63.230	1.00	69.85	C
ATOM	15551	CZ	TYR	C	222	19.215	19.049	62.511	1.00	72.74	C
ATOM	15552	OH	TYR	C	222	18.757	17.898	63.130	1.00	71.88	O
ATOM	15554	CE2	TYR	C	222	19.476	19.019	61.155	1.00	72.46	C
ATOM	15556	CD2	TYR	C	222	19.940	20.174	60.515	1.00	66.13	C
ATOM	15558	C	TYR	C	222	22.748	22.140	61.714	1.00	55.15	C
ATOM	15559	O	TYR	C	222	23.304	21.468	60.853	1.00	51.38	O
ATOM	15560	N	ASP	C	223	22.904	22.013	63.027	1.00	60.19	N
ATOM	15562	CA	ASP	C	223	24.044	21.398	63.668	1.00	57.35	C
ATOM	15564	CB	ASP	C	223	24.600	20.222	62.885	1.00	64.20	C
ATOM	15567	CG	ASP	C	223	25.633	19.430	63.682	1.00	68.05	C
ATOM	15568	OD1	ASP	C	223	26.491	18.782	63.058	1.00	75.23	O
ATOM	15569	OD2	ASP	C	223	25.669	19.410	64.935	1.00	65.90	O
ATOM	15570	C	ASP	C	223	25.109	22.491	63.857	1.00	53.89	C
ATOM	15571	O	ASP	C	223	25.364	22.902	64.969	1.00	51.49	O
ATOM	15572	N	LYS	C	224	25.729	22.980	62.788	1.00	51.65	N
ATOM	15574	CA	LYS	C	224	26.750	24.020	62.949	1.00	48.28	C
ATOM	15576	CB	LYS	C	224	27.919	23.538	63.825	1.00	49.33	C
ATOM	15579	CG	LYS	C	224	28.786	22.456	63.125	1.00	50.13	C
ATOM	15582	CD	LYS	C	224	29.770	21.673	64.049	1.00	51.00	C
ATOM	15585	CE	LYS	C	224	29.958	20.230	63.586	1.00	56.39	C
ATOM	15588	NZ	LYS	C	224	28.761	19.360	63.812	1.00	54.03	N
ATOM	15592	C	LYS	C	224	27.355	24.489	61.644	1.00	50.04	C
ATOM	15593	O	LYS	C	224	27.279	23.799	60.619	1.00	44.69	O
ATOM	15594	N	SER	C	225	27.960	25.684	61.708	1.00	50.25	N
ATOM	15596	CA	SER	C	225	28.747	26.210	60.604	1.00	47.90	C
ATOM	15598	CB	SER	C	225	28.098	27.468	60.076	1.00	47.14	C
ATOM	15601	OG	SER	C	225	26.865	27.124	59.460	1.00	52.47	O
ATOM	15603	C	SER	C	225	30.179	26.415	61.102	1.00	44.94	C
ATOM	15604	O	SER	C	225	30.396	27.152	62.055	1.00	47.22	O
ATOM	15605	N	ILE	C	226	31.149	25.745	60.479	1.00	45.19	N
ATOM	15607	CA	ILE	C	226	32.557	25.868	60.888	1.00	43.93	C
ATOM	15609	CB	ILE	C	226	33.045	24.557	61.593	1.00	39.91	C
ATOM	15611	CG1	ILE	C	226	33.415	23.500	60.579	1.00	39.64	C
ATOM	15614	CD1	ILE	C	226	34.031	22.226	61.231	1.00	37.78	C

ATOM	15618	CG2	ILE	C	226	31.999	24.023	62.556	1.00	42.23	C
ATOM	15622	C	ILE	C	226	33.472	26.181	59.710	1.00	43.36	C
ATOM	15623	O	ILE	C	226	33.060	26.084	58.545	1.00	42.72	O
ATOM	15624	N	VAL	C	227	34.717	26.544	60.020	1.00	45.45	N
ATOM	15626	CA	VAL	C	227	35.743	26.881	59.000	1.00	48.25	C
ATOM	15628	CB	VAL	C	227	36.309	28.367	59.169	1.00	47.46	C
ATOM	15630	CG1	VAL	C	227	37.483	28.629	58.234	1.00	46.44	C
ATOM	15634	CG2	VAL	C	227	35.241	29.399	58.940	1.00	48.83	C
ATOM	15638	C	VAL	C	227	36.907	25.894	59.111	1.00	44.62	C
ATOM	15639	O	VAL	C	227	37.588	25.862	60.143	1.00	41.47	O
ATOM	15640	N	ASP	C	228	37.146	25.120	58.043	1.00	45.60	N
ATOM	15642	CA	ASP	C	228	38.103	24.013	58.065	1.00	43.43	C
ATOM	15644	CB	ASP	C	228	37.291	22.734	58.217	1.00	44.61	C
ATOM	15647	CG	ASP	C	228	38.162	21.501	58.399	1.00	49.06	C
ATOM	15648	OD1	ASP	C	228	39.346	21.674	58.748	1.00	51.29	O
ATOM	15649	OD2	ASP	C	228	37.754	20.325	58.225	1.00	48.80	O
ATOM	15650	C	ASP	C	228	39.059	23.867	56.868	1.00	42.97	C
ATOM	15651	O	ASP	C	228	38.667	23.383	55.830	1.00	51.06	O
ATOM	15652	N	SER	C	229	40.319	24.264	57.035	1.00	42.95	N
ATOM	15654	CA	SER	C	229	41.355	24.153	55.999	1.00	42.72	C
ATOM	15656	CB	SER	C	229	42.649	24.816	56.493	1.00	45.39	C
ATOM	15659	OG	SER	C	229	43.168	24.142	57.661	1.00	48.69	O
ATOM	15661	C	SER	C	229	41.719	22.733	55.619	1.00	43.75	C
ATOM	15662	O	SER	C	229	42.444	22.509	54.667	1.00	44.82	O
ATOM	15663	N	GLY	C	230	41.256	21.765	56.389	1.00	47.33	N
ATOM	15665	CA	GLY	C	230	41.472	20.366	56.072	1.00	45.82	C
ATOM	15668	C	GLY	C	230	40.324	19.725	55.294	1.00	47.37	C
ATOM	15669	O	GLY	C	230	40.365	18.517	55.074	1.00	50.08	O
ATOM	15670	N	THR	C	231	39.329	20.528	54.875	1.00	50.13	N
ATOM	15672	CA	THR	C	231	38.127	20.075	54.126	1.00	44.81	C
ATOM	15674	CB	THR	C	231	36.847	20.427	54.846	1.00	41.41	C
ATOM	15676	OG1	THR	C	231	36.874	19.913	56.171	1.00	42.47	O
ATOM	15678	CG2	THR	C	231	35.737	19.674	54.262	1.00	45.87	C
ATOM	15682	C	THR	C	231	38.097	20.737	52.773	1.00	46.97	C
ATOM	15683	O	THR	C	231	38.225	21.973	52.653	1.00	41.58	O
ATOM	15684	N	THR	C	232	37.903	19.909	51.755	1.00	47.97	N
ATOM	15686	CA	THR	C	232	38.114	20.336	50.382	1.00	48.47	C
ATOM	15688	CB	THR	C	232	38.315	19.108	49.509	1.00	47.83	C
ATOM	15690	OG1	THR	C	232	39.514	18.422	49.871	1.00	46.26	O
ATOM	15692	CG2	THR	C	232	38.589	19.543	48.087	1.00	52.26	C
ATOM	15696	C	THR	C	232	36.991	21.136	49.741	1.00	49.88	C
ATOM	15697	O	THR	C	232	37.264	22.026	48.965	1.00	52.26	O
ATOM	15698	N	ASN	C	233	35.743	20.788	50.054	1.00	47.73	N
ATOM	15700	CA	ASN	C	233	34.586	21.318	49.385	1.00	44.90	C
ATOM	15702	CB	ASN	C	233	33.570	20.208	49.063	1.00	44.37	C
ATOM	15705	CG	ASN	C	233	34.025	19.181	48.006	1.00	47.43	C
ATOM	15706	OD1	ASN	C	233	35.051	19.285	47.345	1.00	52.27	O
ATOM	15707	ND2	ASN	C	233	33.216	18.155	47.871	1.00	47.91	N
ATOM	15710	C	ASN	C	233	33.865	22.287	50.313	1.00	49.52	C
ATOM	15711	O	ASN	C	233	34.283	22.502	51.451	1.00	51.70	O
ATOM	15712	N	LEU	C	234	32.787	22.878	49.792	1.00	49.50	N
ATOM	15714	CA	LEU	C	234	31.851	23.671	50.561	1.00	50.43	C
ATOM	15716	CB	LEU	C	234	31.168	24.715	49.667	1.00	49.25	C
ATOM	15719	CG	LEU	C	234	30.577	25.984	50.268	1.00	46.33	C
ATOM	15721	CD1	LEU	C	234	29.479	26.523	49.377	1.00	40.51	C
ATOM	15725	CD2	LEU	C	234	30.090	25.777	51.667	1.00	46.97	C
ATOM	15729	C	LEU	C	234	30.852	22.593	50.965	1.00	49.62	C

ATOM	15730	O	LEU	C	234	30.407	21.816	50.116	1.00 45.22	O
ATOM	15731	N	ARG	C	235	30.491	22.520	52.239	1.00 48.90	N
ATOM	15733	CA	ARG	C	235	29.625	21.424	52.677	1.00 44.81	C
ATOM	15735	CB	ARG	C	235	30.348	20.503	53.656	1.00 43.27	C
ATOM	15738	CG	ARG	C	235	31.341	19.584	53.002	1.00 43.89	C
ATOM	15741	CD	ARG	C	235	30.842	18.160	52.801	1.00 50.43	C
ATOM	15744	NE	ARG	C	235	31.337	17.255	53.837	1.00 50.04	N
ATOM	15746	CZ	ARG	C	235	31.221	15.938	53.811	1.00 45.48	C
ATOM	15747	NH1	ARG	C	235	31.708	15.258	54.800	1.00 46.80	N
ATOM	15750	NH2	ARG	C	235	30.623	15.297	52.831	1.00 47.49	N
ATOM	15753	C	ARG	C	235	28.396	21.986	53.309	1.00 40.98	C
ATOM	15754	O	ARG	C	235	28.468	22.809	54.227	1.00 37.83	O
ATOM	15755	N	LEU	C	236	27.250	21.535	52.823	1.00 39.74	N
ATOM	15757	CA	LEU	C	236	26.029	22.121	53.291	1.00 40.54	C
ATOM	15759	CB	LEU	C	236	25.356	23.023	52.230	1.00 44.87	C
ATOM	15762	CG	LEU	C	236	26.128	24.202	51.585	1.00 44.63	C
ATOM	15764	CD1	LEU	C	236	26.000	24.076	50.073	1.00 44.76	C
ATOM	15768	CD2	LEU	C	236	25.626	25.572	52.036	1.00 45.65	C
ATOM	15772	C	LEU	C	236	25.108	21.049	53.643	1.00 43.06	C
ATOM	15773	O	LEU	C	236	24.992	20.025	52.998	1.00 50.00	O
ATOM	15774	N	PRO	C	237	24.421	21.296	54.709	1.00 43.05	N
ATOM	15775	CA	PRO	C	237	23.369	20.404	55.125	1.00 47.30	C
ATOM	15777	CB	PRO	C	237	22.620	21.271	56.095	1.00 43.42	C
ATOM	15780	CG	PRO	C	237	23.724	22.119	56.697	1.00 39.72	C
ATOM	15783	CD	PRO	C	237	24.594	22.448	55.598	1.00 39.54	C
ATOM	15786	C	PRO	C	237	22.468	19.981	53.957	1.00 56.07	C
ATOM	15787	O	PRO	C	237	22.182	20.767	53.053	1.00 61.19	O
ATOM	15788	N	LYS	C	238	22.049	18.724	54.011	1.00 64.48	N
ATOM	15790	CA	LYS	C	238	21.060	18.088	53.117	1.00 67.74	C
ATOM	15792	CB	LYS	C	238	20.344	16.981	53.939	1.00 70.89	C
ATOM	15795	CG	LYS	C	238	19.364	16.043	53.183	1.00 75.72	C
ATOM	15798	CD	LYS	C	238	20.022	15.198	52.057	1.00 77.64	C
ATOM	15801	CE	LYS	C	238	19.238	13.898	51.786	1.00 76.46	C
ATOM	15804	NZ	LYS	C	238	19.681	13.117	50.588	1.00 74.66	N
ATOM	15808	C	LYS	C	238	20.005	19.015	52.472	1.00 67.39	C
ATOM	15809	O	LYS	C	238	19.814	19.005	51.247	1.00 67.71	O
ATOM	15810	N	LYS	C	239	19.303	19.801	53.277	1.00 64.13	N
ATOM	15812	CA	LYS	C	239	18.305	20.683	52.716	1.00 64.27	C
ATOM	15814	CB	LYS	C	239	17.338	21.171	53.792	1.00 68.69	C
ATOM	15817	CG	LYS	C	239	16.086	20.292	53.968	1.00 74.28	C
ATOM	15820	CD	LYS	C	239	15.063	20.977	54.894	1.00 76.92	C
ATOM	15823	CE	LYS	C	239	14.640	22.366	54.381	1.00 76.03	C
ATOM	15826	NZ	LYS	C	239	13.915	23.177	55.415	1.00 74.75	N
ATOM	15830	C	LYS	C	239	18.918	21.886	52.013	1.00 62.66	C
ATOM	15831	O	LYS	C	239	18.495	22.234	50.903	1.00 62.29	O
ATOM	15832	N	VAL	C	240	19.913	22.528	52.637	1.00 56.54	N
ATOM	15834	CA	VAL	C	240	20.450	23.737	52.039	1.00 48.20	C
ATOM	15836	CB	VAL	C	240	21.459	24.457	52.876	1.00 47.96	C
ATOM	15838	CG1	VAL	C	240	21.799	25.770	52.198	1.00 51.82	C
ATOM	15842	CG2	VAL	C	240	20.934	24.744	54.268	1.00 49.07	C
ATOM	15846	C	VAL	C	240	21.110	23.315	50.780	1.00 44.11	C
ATOM	15847	O	VAL	C	240	21.003	23.955	49.756	1.00 40.57	O
ATOM	15848	N	PHE	C	241	21.797	22.200	50.839	1.00 43.45	N
ATOM	15850	CA	PHE	C	241	22.457	21.728	49.645	1.00 44.85	C
ATOM	15852	CB	PHE	C	241	23.107	20.393	49.912	1.00 44.07	C
ATOM	15855	CG	PHE	C	241	23.738	19.768	48.699	1.00 44.31	C
ATOM	15856	CD1	PHE	C	241	25.015	20.034	48.369	1.00 40.53	C

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ATOM  15858  CE1 PHE C 241      25.575  19.460  47.272  1.00 42.85           C
ATOM  15860  CZ  PHE C 241      24.879  18.608  46.499  1.00 35.50           C
ATOM  15862  CE2 PHE C 241      23.628  18.323  46.804  1.00 37.83           C
ATOM  15864  CD2 PHE C 241      23.039  18.897  47.899  1.00 44.17           C
ATOM  15866  C   PHE C 241      21.495  21.587  48.488  1.00 46.73           C
ATOM  15867  O   PHE C 241      21.880  21.762  47.328  1.00 46.03           O
ATOM  15868  N   GLU C 242      20.241  21.294  48.824  1.00 50.74           N
ATOM  15870  CA  GLU C 242      19.228  20.899  47.851  1.00 51.33           C
ATOM  15872  CB  GLU C 242      18.100  20.168  48.570  1.00 56.02           C
ATOM  15875  CG  GLU C 242      18.214  18.657  48.515  1.00 62.01           C
ATOM  15878  CD  GLU C 242      18.576  18.183  47.122  1.00 66.03           C
ATOM  15879  OE1 GLU C 242      18.159  18.881  46.155  1.00 67.53           O
ATOM  15880  OE2 GLU C 242      19.277  17.134  46.997  1.00 60.97           O
ATOM  15881  C   GLU C 242      18.645  22.076  47.116  1.00 50.90           C
ATOM  15882  O   GLU C 242      18.470  22.057  45.901  1.00 46.64           O
ATOM  15883  N   ALA C 243      18.337  23.100  47.883  1.00 47.93           N
ATOM  15885  CA  ALA C 243      17.831  24.310  47.324  1.00 50.32           C
ATOM  15887  CB  ALA C 243      17.431  25.228  48.429  1.00 49.97           C
ATOM  15891  C   ALA C 243      18.932  24.932  46.484  1.00 53.72           C
ATOM  15892  O   ALA C 243      18.694  25.406  45.376  1.00 58.27           O
ATOM  15893  N   ALA C 244      20.142  24.925  47.020  1.00 55.49           N
ATOM  15895  CA  ALA C 244      21.270  25.524  46.335  1.00 53.08           C
ATOM  15897  CB  ALA C 244      22.505  25.573  47.229  1.00 55.11           C
ATOM  15901  C   ALA C 244      21.575  24.821  45.057  1.00 53.02           C
ATOM  15902  O   ALA C 244      21.779  25.481  44.073  1.00 60.49           O
ATOM  15903  N   VAL C 245      21.608  23.495  45.025  1.00 56.92           N
ATOM  15905  CA  VAL C 245      21.907  22.825  43.748  1.00 53.60           C
ATOM  15907  CB  VAL C 245      22.025  21.300  43.842  1.00 55.63           C
ATOM  15909  CG1 VAL C 245      22.667  20.709  42.554  1.00 54.38           C
ATOM  15913  CG2 VAL C 245      22.819  20.900  45.014  1.00 58.96           C
ATOM  15917  C   VAL C 245      20.804  23.069  42.734  1.00 55.12           C
ATOM  15918  O   VAL C 245      21.060  22.974  41.544  1.00 58.24           O
ATOM  15919  N   LYS C 246      19.574  23.356  43.160  1.00 52.47           N
ATOM  15921  CA  LYS C 246      18.549  23.620  42.157  1.00 58.91           C
ATOM  15923  CB  LYS C 246      17.129  23.817  42.754  1.00 62.86           C
ATOM  15926  CG  LYS C 246      16.324  22.600  43.183  1.00 70.41           C
ATOM  15929  CD  LYS C 246      16.388  21.363  42.223  1.00 76.82           C
ATOM  15932  CE  LYS C 246      17.595  20.433  42.499  1.00 77.01           C
ATOM  15935  NZ  LYS C 246      17.683  19.311  41.510  1.00 75.94           N
ATOM  15939  C   LYS C 246      18.944  24.940  41.486  1.00 56.47           C
ATOM  15940  O   LYS C 246      19.066  25.062  40.257  1.00 59.03           O
ATOM  15941  N   SER C 247      19.153  25.920  42.348  1.00 47.24           N
ATOM  15943  CA  SER C 247      19.348  27.272  41.934  1.00 47.24           C
ATOM  15945  CB  SER C 247      19.509  28.132  43.169  1.00 47.72           C
ATOM  15948  OG  SER C 247      19.430  29.494  42.810  1.00 53.48           O
ATOM  15950  C   SER C 247      20.563  27.421  41.042  1.00 47.61           C
ATOM  15951  O   SER C 247      20.552  28.143  40.030  1.00 48.26           O
ATOM  15952  N   ILE C 248      21.612  26.730  41.432  1.00 40.55           N
ATOM  15954  CA  ILE C 248      22.802  26.795  40.710  1.00 39.34           C
ATOM  15956  CB  ILE C 248      23.804  25.942  41.355  1.00 39.28           C
ATOM  15958  CG1 ILE C 248      24.164  26.530  42.675  1.00 37.69           C
ATOM  15961  CD1 ILE C 248      25.595  26.384  42.926  1.00 40.41           C
ATOM  15965  CG2 ILE C 248      25.073  25.940  40.565  1.00 45.18           C
ATOM  15969  C   ILE C 248      22.498  26.311  39.348  1.00 47.60           C
ATOM  15970  O   ILE C 248      22.793  27.013  38.398  1.00 52.36           O
ATOM  15971  N   LYS C 249      21.894  25.118  39.244  1.00 54.81           N
ATOM  15973  CA  LYS C 249      21.619  24.488  37.939  1.00 52.55           C
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ATOM	15975	CB	LYS	C	249	20.735	23.263	38.079	1.00	55.84	C
ATOM	15978	CG	LYS	C	249	21.397	21.980	38.542	1.00	60.75	C
ATOM	15981	CD	LYS	C	249	20.426	20.783	38.337	1.00	63.48	C
ATOM	15984	CE	LYS	C	249	20.792	19.557	39.172	1.00	67.61	C
ATOM	15987	NZ	LYS	C	249	19.732	19.211	40.190	1.00	73.03	N
ATOM	15991	C	LYS	C	249	20.837	25.463	37.110	1.00	51.86	C
ATOM	15992	O	LYS	C	249	21.209	25.796	35.990	1.00	56.70	O
ATOM	15993	N	ALA	C	250	19.737	25.924	37.683	1.00	44.72	N
ATOM	15995	CA	ALA	C	250	18.871	26.855	36.999	1.00	43.29	C
ATOM	15997	CB	ALA	C	250	17.850	27.442	37.977	1.00	38.29	C
ATOM	16001	C	ALA	C	250	19.696	27.950	36.371	1.00	45.27	C
ATOM	16002	O	ALA	C	250	19.535	28.253	35.199	1.00	46.37	O
ATOM	16003	N	ALA	C	251	20.600	28.539	37.153	1.00	44.64	N
ATOM	16005	CA	ALA	C	251	21.362	29.667	36.658	1.00	42.02	C
ATOM	16007	CB	ALA	C	251	22.173	30.242	37.739	1.00	39.56	C
ATOM	16011	C	ALA	C	251	22.237	29.272	35.492	1.00	44.55	C
ATOM	16012	O	ALA	C	251	22.459	30.029	34.574	1.00	53.96	O
ATOM	16013	N	SER	C	252	22.716	28.059	35.523	1.00	48.25	N
ATOM	16015	CA	SER	C	252	23.581	27.567	34.487	1.00	50.72	C
ATOM	16017	CB	SER	C	252	24.561	26.537	35.095	1.00	50.46	C
ATOM	16020	OG	SER	C	252	24.087	26.053	36.372	1.00	50.66	O
ATOM	16022	C	SER	C	252	22.746	26.890	33.427	1.00	51.45	C
ATOM	16023	O	SER	C	252	23.305	26.186	32.595	1.00	54.49	O
ATOM	16024	N	SER	C	253	21.428	27.104	33.448	1.00	52.44	N
ATOM	16026	CA	SER	C	253	20.502	26.337	32.588	1.00	55.69	C
ATOM	16028	CB	SER	C	253	19.025	26.589	32.995	1.00	58.26	C
ATOM	16031	OG	SER	C	253	18.469	27.826	32.540	1.00	55.32	O
ATOM	16033	C	SER	C	253	20.673	26.458	31.073	1.00	58.55	C
ATOM	16034	O	SER	C	253	19.693	26.428	30.343	1.00	67.47	O
ATOM	16035	N	THR	C	254	21.917	26.600	30.614	1.00	62.21	N
ATOM	16037	CA	THR	C	254	22.258	26.667	29.181	1.00	64.73	C
ATOM	16039	CB	THR	C	254	22.914	27.939	28.896	1.00	66.84	C
ATOM	16041	OG1	THR	C	254	24.215	27.899	29.500	1.00	71.03	O
ATOM	16043	CG2	THR	C	254	22.183	29.063	29.569	1.00	72.72	C
ATOM	16047	C	THR	C	254	23.294	25.658	28.754	1.00	68.84	C
ATOM	16048	O	THR	C	254	23.746	25.640	27.602	1.00	68.20	O
ATOM	16049	N	GLU	C	255	23.714	24.865	29.712	1.00	69.98	N
ATOM	16051	CA	GLU	C	255	24.513	23.729	29.447	1.00	69.15	C
ATOM	16053	CB	GLU	C	255	25.990	23.900	29.778	1.00	69.01	C
ATOM	16056	CG	GLU	C	255	26.765	24.517	28.627	1.00	73.89	C
ATOM	16059	CD	GLU	C	255	28.135	23.893	28.412	1.00	80.19	C
ATOM	16060	OE1	GLU	C	255	28.259	22.606	28.391	1.00	77.88	O
ATOM	16061	OE2	GLU	C	255	29.078	24.723	28.256	1.00	75.03	O
ATOM	16062	C	GLU	C	255	23.813	22.915	30.451	1.00	68.56	C
ATOM	16063	O	GLU	C	255	23.260	23.424	31.432	1.00	63.70	O
ATOM	16064	N	LYS	C	256	23.797	21.633	30.201	1.00	69.73	N
ATOM	16066	CA	LYS	C	256	23.140	20.788	31.117	1.00	69.57	C
ATOM	16068	CB	LYS	C	256	21.875	20.222	30.474	1.00	71.79	C
ATOM	16071	CG	LYS	C	256	20.817	21.373	30.293	1.00	73.04	C
ATOM	16074	CD	LYS	C	256	20.475	22.027	31.651	1.00	75.70	C
ATOM	16077	CE	LYS	C	256	19.065	22.620	31.712	1.00	74.59	C
ATOM	16080	NZ	LYS	C	256	18.582	23.111	30.395	1.00	76.39	N
ATOM	16084	C	LYS	C	256	24.219	19.828	31.484	1.00	67.18	C
ATOM	16085	O	LYS	C	256	25.204	19.623	30.763	1.00	58.20	O
ATOM	16086	N	PHE	C	257	24.071	19.275	32.655	1.00	68.64	N
ATOM	16088	CA	PHE	C	257	25.041	18.341	33.060	1.00	69.01	C
ATOM	16090	CB	PHE	C	257	26.005	19.050	34.009	1.00	72.10	C

ATOM	16093	CG	PHE	C	257	26.744	20.209	33.362	1.00	69.14	C
ATOM	16094	CD1	PHE	C	257	26.419	21.522	33.680	1.00	69.09	C
ATOM	16096	CE1	PHE	C	257	27.086	22.590	33.094	1.00	67.65	C
ATOM	16098	CZ	PHE	C	257	28.091	22.354	32.180	1.00	71.28	C
ATOM	16100	CE2	PHE	C	257	28.431	21.043	31.849	1.00	72.57	C
ATOM	16102	CD2	PHE	C	257	27.755	19.980	32.439	1.00	71.04	C
ATOM	16104	C	PHE	C	257	24.335	17.131	33.647	1.00	69.41	C
ATOM	16105	O	PHE	C	257	23.173	17.187	34.100	1.00	68.36	O
ATOM	16106	N	PRO	C	258	25.041	16.022	33.594	1.00	68.72	N
ATOM	16107	CA	PRO	C	258	24.559	14.751	34.139	1.00	72.08	C
ATOM	16109	CB	PRO	C	258	25.649	13.798	33.704	1.00	72.60	C
ATOM	16112	CG	PRO	C	258	26.863	14.705	33.627	1.00	72.00	C
ATOM	16115	CD	PRO	C	258	26.363	15.901	32.963	1.00	68.28	C
ATOM	16118	C	PRO	C	258	24.507	14.757	35.662	1.00	74.57	C
ATOM	16119	O	PRO	C	258	25.438	15.317	36.245	1.00	75.66	O
ATOM	16120	N	ASP	C	259	23.479	14.151	36.272	1.00	75.85	N
ATOM	16122	CA	ASP	C	259	23.355	14.015	37.747	1.00	77.50	C
ATOM	16124	CB	ASP	C	259	22.436	12.845	38.118	1.00	77.91	C
ATOM	16127	CG	ASP	C	259	20.964	13.134	37.904	1.00	80.16	C
ATOM	16128	OD1	ASP	C	259	20.559	14.322	37.914	1.00	84.49	O
ATOM	16129	OD2	ASP	C	259	20.138	12.206	37.727	1.00	74.07	O
ATOM	16130	C	ASP	C	259	24.649	13.750	38.543	1.00	77.00	C
ATOM	16131	O	ASP	C	259	24.727	14.079	39.732	1.00	79.56	O
ATOM	16132	N	GLY	C	260	25.648	13.148	37.914	1.00	75.01	N
ATOM	16134	CA	GLY	C	260	26.852	12.769	38.636	1.00	75.71	C
ATOM	16137	C	GLY	C	260	27.782	13.929	38.922	1.00	74.37	C
ATOM	16138	O	GLY	C	260	28.535	13.928	39.919	1.00	75.33	O
ATOM	16139	N	PHE	C	261	27.730	14.918	38.035	1.00	69.34	N
ATOM	16141	CA	PHE	C	261	28.550	16.095	38.171	1.00	62.53	C
ATOM	16143	CB	PHE	C	261	28.341	17.037	36.990	1.00	63.25	C
ATOM	16146	CG	PHE	C	261	29.079	18.334	37.098	1.00	57.93	C
ATOM	16147	CD1	PHE	C	261	30.455	18.360	37.184	1.00	55.84	C
ATOM	16149	CE1	PHE	C	261	31.129	19.557	37.281	1.00	55.60	C
ATOM	16151	CZ	PHE	C	261	30.424	20.732	37.293	1.00	55.30	C
ATOM	16153	CE2	PHE	C	261	29.056	20.715	37.210	1.00	56.24	C
ATOM	16155	CD2	PHE	C	261	28.393	19.522	37.110	1.00	55.44	C
ATOM	16157	C	PHE	C	261	28.026	16.693	39.413	1.00	58.82	C
ATOM	16158	O	PHE	C	261	28.717	16.758	40.395	1.00	61.51	O
ATOM	16159	N	TRP	C	262	26.772	17.095	39.384	1.00	58.00	N
ATOM	16161	CA	TRP	C	262	26.179	17.725	40.536	1.00	59.65	C
ATOM	16163	CB	TRP	C	262	24.722	18.071	40.271	1.00	64.16	C
ATOM	16166	CG	TRP	C	262	24.498	19.084	39.179	1.00	67.86	C
ATOM	16167	CD1	TRP	C	262	23.762	18.900	38.046	1.00	69.53	C
ATOM	16169	NE1	TRP	C	262	23.775	20.038	37.278	1.00	70.01	N
ATOM	16171	CE2	TRP	C	262	24.527	20.992	37.910	1.00	68.68	C
ATOM	16172	CD2	TRP	C	262	24.995	20.427	39.113	1.00	67.00	C
ATOM	16173	CE3	TRP	C	262	25.793	21.210	39.941	1.00	69.48	C
ATOM	16175	CZ3	TRP	C	262	26.091	22.516	39.547	1.00	69.43	C
ATOM	16177	CH2	TRP	C	262	25.608	23.038	38.351	1.00	66.24	C
ATOM	16179	CZ2	TRP	C	262	24.830	22.295	37.520	1.00	66.76	C
ATOM	16181	C	TRP	C	262	26.284	16.847	41.766	1.00	58.97	C
ATOM	16182	O	TRP	C	262	26.059	17.301	42.869	1.00	57.31	O
ATOM	16183	N	LEU	C	263	26.601	15.574	41.597	1.00	65.06	N
ATOM	16185	CA	LEU	C	263	26.806	14.727	42.767	1.00	67.45	C
ATOM	16187	CB	LEU	C	263	26.279	13.332	42.533	1.00	68.47	C
ATOM	16190	CG	LEU	C	263	24.933	13.109	43.225	1.00	72.82	C
ATOM	16192	CD1	LEU	C	263	24.425	11.685	42.977	1.00	71.73	C

ATOM	16196	CD2	LEU	C	263	25.028	13.405	44.740	1.00	73.38	C
ATOM	16200	C	LEU	C	263	28.268	14.668	43.160	1.00	70.29	C
ATOM	16201	O	LEU	C	263	28.647	13.948	44.076	1.00	72.79	O
ATOM	16202	N	GLY	C	264	29.083	15.429	42.449	1.00	70.41	N
ATOM	16204	CA	GLY	C	264	30.488	15.522	42.741	1.00	72.58	C
ATOM	16207	C	GLY	C	264	31.254	14.276	42.369	1.00	74.99	C
ATOM	16208	O	GLY	C	264	32.427	14.136	42.728	1.00	77.68	O
ATOM	16209	N	GLU	C	265	30.623	13.377	41.627	1.00	76.35	N
ATOM	16211	CA	GLU	C	265	31.266	12.097	41.328	1.00	75.36	C
ATOM	16213	CB	GLU	C	265	30.247	10.967	41.441	1.00	75.63	C
ATOM	16216	CG	GLU	C	265	30.068	10.546	42.883	1.00	80.22	C
ATOM	16219	CD	GLU	C	265	28.981	9.514	43.067	1.00	86.58	C
ATOM	16220	OE1	GLU	C	265	28.455	9.405	44.208	1.00	91.85	O
ATOM	16221	OE2	GLU	C	265	28.654	8.812	42.080	1.00	88.76	O
ATOM	16222	C	GLU	C	265	31.978	12.017	39.999	1.00	73.02	C
ATOM	16223	O	GLU	C	265	32.902	11.222	39.835	1.00	76.03	O
ATOM	16224	N	GLN	C	266	31.566	12.831	39.048	1.00	72.24	N
ATOM	16226	CA	GLN	C	266	32.162	12.771	37.730	1.00	73.00	C
ATOM	16228	CB	GLN	C	266	31.280	12.063	36.723	1.00	75.94	C
ATOM	16231	CG	GLN	C	266	29.788	12.214	36.972	1.00	81.31	C
ATOM	16234	CD	GLN	C	266	29.003	11.021	36.409	1.00	87.99	C
ATOM	16235	OE1	GLN	C	266	28.246	10.351	37.140	1.00	89.26	O
ATOM	16236	NE2	GLN	C	266	29.191	10.748	35.112	1.00	87.50	N
ATOM	16239	C	GLN	C	266	32.393	14.164	37.330	1.00	69.61	C
ATOM	16240	O	GLN	C	266	31.739	15.075	37.808	1.00	71.73	O
ATOM	16241	N	LEU	C	267	33.331	14.334	36.433	1.00	68.39	N
ATOM	16243	CA	LEU	C	267	33.829	15.649	36.183	1.00	65.70	C
ATOM	16245	CB	LEU	C	267	35.351	15.611	36.200	1.00	66.35	C
ATOM	16248	CG	LEU	C	267	35.956	14.641	35.211	1.00	65.47	C
ATOM	16250	CD1	LEU	C	267	35.336	14.904	33.871	1.00	70.86	C
ATOM	16254	CD2	LEU	C	267	37.458	14.823	35.131	1.00	67.21	C
ATOM	16258	C	LEU	C	267	33.306	16.140	34.883	1.00	66.62	C
ATOM	16259	O	LEU	C	267	32.568	15.458	34.196	1.00	68.94	O
ATOM	16260	N	VAL	C	268	33.695	17.344	34.540	1.00	68.75	N
ATOM	16262	CA	VAL	C	268	33.215	17.954	33.335	1.00	69.12	C
ATOM	16264	CB	VAL	C	268	32.183	19.052	33.644	1.00	65.32	C
ATOM	16266	CG1	VAL	C	268	31.593	19.635	32.397	1.00	67.75	C
ATOM	16270	CG2	VAL	C	268	31.078	18.451	34.429	1.00	67.90	C
ATOM	16274	C	VAL	C	268	34.486	18.491	32.781	1.00	70.89	C
ATOM	16275	O	VAL	C	268	35.439	18.735	33.524	1.00	77.01	O
ATOM	16276	N	CYS	C	269	34.523	18.651	31.477	1.00	70.74	N
ATOM	16278	CA	CYS	C	269	35.718	19.116	30.843	1.00	71.32	C
ATOM	16280	CB	CYS	C	269	36.480	17.899	30.275	1.00	71.55	C
ATOM	16283	SG	CYS	C	269	37.148	16.791	31.565	1.00	73.61	S
ATOM	16284	C	CYS	C	269	35.301	20.102	29.776	1.00	69.44	C
ATOM	16285	O	CYS	C	269	34.176	20.064	29.278	1.00	72.40	O
ATOM	16286	N	TRP	C	270	36.213	20.994	29.444	1.00	68.17	N
ATOM	16288	CA	TRP	C	270	35.995	21.964	28.382	1.00	68.38	C
ATOM	16290	CB	TRP	C	270	35.565	23.322	28.933	1.00	68.67	C
ATOM	16293	CG	TRP	C	270	34.140	23.496	29.291	1.00	62.51	C
ATOM	16294	CD1	TRP	C	270	33.089	23.710	28.443	1.00	63.68	C
ATOM	16296	NE1	TRP	C	270	31.925	23.859	29.159	1.00	67.43	N
ATOM	16298	CE2	TRP	C	270	32.215	23.737	30.491	1.00	63.27	C
ATOM	16299	CD2	TRP	C	270	33.602	23.513	30.605	1.00	55.28	C
ATOM	16300	CE3	TRP	C	270	34.151	23.368	31.866	1.00	54.22	C
ATOM	16302	CZ3	TRP	C	270	33.332	23.436	32.950	1.00	62.69	C
ATOM	16304	CH2	TRP	C	270	31.957	23.653	32.813	1.00	66.25	C

ATOM	16306	CZ2	TRP	C	270	31.382	23.807	31.588	1.00	62.56	C
ATOM	16308	C	TRP	C	270	37.315	22.194	27.677	1.00	69.11	C
ATOM	16309	O	TRP	C	270	38.364	22.221	28.317	1.00	70.17	O
ATOM	16310	N	GLN	C	271	37.267	22.369	26.360	1.00	71.22	N
ATOM	16312	CA	GLN	C	271	38.477	22.588	25.577	1.00	69.66	C
ATOM	16314	CB	GLN	C	271	38.160	22.947	24.102	1.00	73.03	C
ATOM	16317	CG	GLN	C	271	37.704	21.781	23.172	1.00	74.99	C
ATOM	16320	CD	GLN	C	271	36.937	22.285	21.925	1.00	83.57	C
ATOM	16321	OE1	GLN	C	271	37.039	23.476	21.547	1.00	84.53	O
ATOM	16322	NE2	GLN	C	271	36.168	21.387	21.294	1.00	80.42	N
ATOM	16325	C	GLN	C	271	39.156	23.760	26.217	1.00	68.22	C
ATOM	16326	O	GLN	C	271	38.520	24.774	26.484	1.00	67.07	O
ATOM	16327	N	ALA	C	272	40.440	23.630	26.477	1.00	71.24	N
ATOM	16329	CA	ALA	C	272	41.238	24.745	26.979	1.00	74.33	C
ATOM	16331	CB	ALA	C	272	42.541	24.817	26.195	1.00	74.83	C
ATOM	16335	C	ALA	C	272	40.536	26.126	26.949	1.00	74.62	C
ATOM	16336	O	ALA	C	272	39.503	26.332	26.311	1.00	71.88	O
ATOM	16337	N	GLY	C	273	41.122	27.065	27.674	1.00	76.58	N
ATOM	16339	CA	GLY	C	273	40.622	28.420	27.784	1.00	76.43	C
ATOM	16342	C	GLY	C	273	39.135	28.692	27.603	1.00	77.74	C
ATOM	16343	O	GLY	C	273	38.736	29.848	27.710	1.00	77.19	O
ATOM	16344	N	THR	C	274	38.308	27.683	27.339	1.00	76.54	N
ATOM	16346	CA	THR	C	274	36.906	27.955	27.012	1.00	76.18	C
ATOM	16348	CB	THR	C	274	36.486	27.048	25.827	1.00	76.87	C
ATOM	16350	OG1	THR	C	274	36.826	25.697	26.109	1.00	74.47	O
ATOM	16352	CG2	THR	C	274	37.342	27.319	24.594	1.00	80.60	C
ATOM	16356	C	THR	C	274	35.850	27.855	28.124	1.00	74.88	C
ATOM	16357	O	THR	C	274	34.676	28.013	27.834	1.00	80.88	O
ATOM	16358	N	THR	C	275	36.229	27.608	29.375	1.00	70.60	N
ATOM	16360	CA	THR	C	275	35.217	27.451	30.431	1.00	64.63	C
ATOM	16362	CB	THR	C	275	35.871	27.307	31.815	1.00	62.69	C
ATOM	16364	OG1	THR	C	275	36.891	26.304	31.783	1.00	58.88	O
ATOM	16366	CG2	THR	C	275	34.862	26.769	32.815	1.00	60.08	C
ATOM	16370	C	THR	C	275	34.276	28.641	30.467	1.00	59.66	C
ATOM	16371	O	THR	C	275	34.748	29.751	30.547	1.00	55.72	O
ATOM	16372	N	PRO	C	276	32.960	28.443	30.415	1.00	56.44	N
ATOM	16373	CA	PRO	C	276	32.060	29.588	30.442	1.00	55.38	C
ATOM	16375	CB	PRO	C	276	30.771	28.992	29.922	1.00	57.23	C
ATOM	16378	CG	PRO	C	276	30.763	27.713	30.617	1.00	56.39	C
ATOM	16381	CD	PRO	C	276	32.182	27.190	30.320	1.00	57.95	C
ATOM	16384	C	PRO	C	276	31.872	30.073	31.857	1.00	52.50	C
ATOM	16385	O	PRO	C	276	30.764	30.068	32.414	1.00	56.88	O
ATOM	16386	N	TRP	C	277	32.951	30.527	32.459	1.00	49.70	N
ATOM	16388	CA	TRP	C	277	32.835	30.898	33.842	1.00	48.70	C
ATOM	16390	CB	TRP	C	277	34.047	31.691	34.288	1.00	48.72	C
ATOM	16393	CG	TRP	C	277	35.377	30.992	34.300	1.00	42.99	C
ATOM	16394	CD1	TRP	C	277	36.452	31.282	33.497	1.00	44.54	C
ATOM	16396	NE1	TRP	C	277	37.517	30.463	33.795	1.00	40.79	N
ATOM	16398	CE2	TRP	C	277	37.153	29.623	34.816	1.00	41.09	C
ATOM	16399	CD2	TRP	C	277	35.803	29.931	35.159	1.00	42.82	C
ATOM	16400	CE3	TRP	C	277	35.193	29.196	36.190	1.00	43.92	C
ATOM	16402	CZ3	TRP	C	277	35.938	28.193	36.833	1.00	34.69	C
ATOM	16404	CH2	TRP	C	277	37.274	27.915	36.441	1.00	31.59	C
ATOM	16406	CZ2	TRP	C	277	37.888	28.619	35.454	1.00	28.84	C
ATOM	16408	C	TRP	C	277	31.559	31.719	34.043	1.00	50.14	C
ATOM	16409	O	TRP	C	277	30.821	31.528	35.002	1.00	53.55	O
ATOM	16410	N	ASN	C	278	31.287	32.633	33.120	1.00	53.60	N

ATOM	16412	CA	ASN	C	278	30.173	33.561	33.273	1.00	50.74	C
ATOM	16414	CB	ASN	C	278	30.280	34.662	32.191	1.00	54.60	C
ATOM	16417	CG	ASN	C	278	29.472	34.370	30.928	1.00	57.61	C
ATOM	16418	OD1	ASN	C	278	28.305	34.753	30.826	1.00	62.78	O
ATOM	16419	ND2	ASN	C	278	30.101	33.723	29.951	1.00	50.67	N
ATOM	16422	C	ASN	C	278	28.767	32.886	33.392	1.00	52.28	C
ATOM	16423	O	ASN	C	278	27.865	33.415	34.082	1.00	46.13	O
ATOM	16424	N	ILE	C	279	28.582	31.714	32.777	1.00	52.83	N
ATOM	16426	CA	ILE	C	279	27.287	31.048	32.896	1.00	56.47	C
ATOM	16428	CB	ILE	C	279	27.104	29.838	31.946	1.00	57.69	C
ATOM	16430	CG1	ILE	C	279	27.859	28.617	32.471	1.00	57.27	C
ATOM	16433	CD1	ILE	C	279	27.534	27.307	31.703	1.00	54.35	C
ATOM	16437	CG2	ILE	C	279	27.493	30.172	30.507	1.00	58.04	C
ATOM	16441	C	ILE	C	279	27.047	30.544	34.300	1.00	57.88	C
ATOM	16442	O	ILE	C	279	25.936	30.141	34.610	1.00	59.87	O
ATOM	16443	N	PHE	C	280	28.078	30.544	35.144	1.00	56.99	N
ATOM	16445	CA	PHE	C	280	27.934	30.040	36.500	1.00	51.07	C
ATOM	16447	CB	PHE	C	280	29.142	29.215	36.869	1.00	54.92	C
ATOM	16450	CG	PHE	C	280	29.180	27.861	36.227	1.00	51.56	C
ATOM	16451	CD1	PHE	C	280	28.625	26.777	36.852	1.00	48.09	C
ATOM	16453	CE1	PHE	C	280	28.675	25.583	36.298	1.00	46.71	C
ATOM	16455	CZ	PHE	C	280	29.262	25.412	35.110	1.00	53.19	C
ATOM	16457	CE2	PHE	C	280	29.822	26.462	34.471	1.00	52.26	C
ATOM	16459	CD2	PHE	C	280	29.781	27.683	35.031	1.00	48.92	C
ATOM	16461	C	PHE	C	280	27.888	31.203	37.432	1.00	48.27	C
ATOM	16462	O	PHE	C	280	28.646	32.139	37.277	1.00	47.19	O
ATOM	16463	N	PRO	C	281	27.031	31.141	38.427	1.00	45.62	N
ATOM	16464	CA	PRO	C	281	26.801	32.279	39.285	1.00	47.19	C
ATOM	16466	CB	PRO	C	281	25.373	32.029	39.741	1.00	48.28	C
ATOM	16469	CG	PRO	C	281	25.269	30.542	39.864	1.00	44.59	C
ATOM	16472	CD	PRO	C	281	26.237	29.991	38.869	1.00	48.35	C
ATOM	16475	C	PRO	C	281	27.761	32.335	40.463	1.00	48.66	C
ATOM	16476	O	PRO	C	281	28.525	31.410	40.674	1.00	56.99	O
ATOM	16477	N	VAL	C	282	27.712	33.423	41.214	1.00	46.97	N
ATOM	16479	CA	VAL	C	282	28.597	33.628	42.345	1.00	44.44	C
ATOM	16481	CB	VAL	C	282	29.071	35.069	42.430	1.00	44.57	C
ATOM	16483	CG1	VAL	C	282	29.756	35.469	41.118	1.00	45.56	C
ATOM	16487	CG2	VAL	C	282	27.890	36.003	42.759	1.00	34.25	C
ATOM	16491	C	VAL	C	282	27.739	33.349	43.545	1.00	45.50	C
ATOM	16492	O	VAL	C	282	26.506	33.444	43.451	1.00	42.57	O
ATOM	16493	N	ILE	C	283	28.375	33.027	44.664	1.00	38.05	N
ATOM	16495	CA	ILE	C	283	27.636	32.624	45.821	1.00	39.60	C
ATOM	16497	CB	ILE	C	283	27.997	31.210	46.205	1.00	42.77	C
ATOM	16499	CG1	ILE	C	283	27.296	30.218	45.282	1.00	45.31	C
ATOM	16502	CD1	ILE	C	283	28.010	28.859	45.202	1.00	51.32	C
ATOM	16506	CG2	ILE	C	283	27.494	30.935	47.573	1.00	48.65	C
ATOM	16510	C	ILE	C	283	27.951	33.519	46.938	1.00	36.72	C
ATOM	16511	O	ILE	C	283	29.060	33.947	47.071	1.00	39.41	O
ATOM	16512	N	SER	C	284	26.964	33.814	47.765	1.00	43.61	N
ATOM	16514	CA	SER	C	284	27.196	34.724	48.883	1.00	42.34	C
ATOM	16516	CB	SER	C	284	26.479	36.048	48.680	1.00	40.69	C
ATOM	16519	OG	SER	C	284	26.967	36.700	47.532	1.00	40.19	O
ATOM	16521	C	SER	C	284	26.765	34.148	50.197	1.00	42.31	C
ATOM	16522	O	SER	C	284	25.721	33.515	50.367	1.00	42.00	O
ATOM	16523	N	LEU	C	285	27.605	34.361	51.159	1.00	40.93	N
ATOM	16525	CA	LEU	C	285	27.239	33.946	52.450	1.00	40.64	C
ATOM	16527	CB	LEU	C	285	28.263	32.934	52.951	1.00	43.13	C

ATOM	16630	CG	LEU	C	285	28.493	31.677	52.107	1.00	43.50	C
ATOM	16632	CD1	LEU	C	285	29.160	30.630	52.986	1.00	45.83	C
ATOM	16636	CD2	LEU	C	285	27.224	31.096	51.550	1.00	47.33	C
ATOM	16640	C	LEU	C	285	27.238	35.237	53.241	1.00	38.54	C
ATOM	16641	O	LEU	C	285	28.192	36.012	53.142	1.00	38.71	O
ATOM	16642	N	TYR	C	286	26.182	35.508	54.004	1.00	41.40	N
ATOM	16644	CA	TYR	C	286	26.201	36.697	54.882	1.00	43.34	C
ATOM	16646	CB	TYR	C	286	24.868	37.456	54.919	1.00	43.01	C
ATOM	16649	CG	TYR	C	286	24.458	38.178	53.648	1.00	43.98	C
ATOM	16650	CD1	TYR	C	286	24.169	37.480	52.485	1.00	41.24	C
ATOM	16652	CE1	TYR	C	286	23.796	38.118	51.350	1.00	37.43	C
ATOM	16654	CZ	TYR	C	286	23.683	39.479	51.318	1.00	38.55	C
ATOM	16655	OH	TYR	C	286	23.279	40.098	50.129	1.00	31.80	O
ATOM	16657	CE2	TYR	C	286	23.950	40.197	52.451	1.00	36.26	C
ATOM	16659	CD2	TYR	C	286	24.331	39.541	53.615	1.00	41.46	C
ATOM	16661	C	TYR	C	286	26.525	36.179	56.278	1.00	40.55	C
ATOM	16662	O	TYR	C	286	25.810	35.340	56.792	1.00	35.99	O
ATOM	16663	N	LEU	C	287	27.609	36.668	56.876	1.00	43.12	N
ATOM	16665	CA	LEU	C	287	27.992	36.203	58.201	1.00	44.11	C
ATOM	16667	CB	LEU	C	287	29.451	35.807	58.319	1.00	44.04	C
ATOM	16670	CG	LEU	C	287	30.022	34.821	57.316	1.00	45.36	C
ATOM	16672	CD1	LEU	C	287	31.494	35.117	57.164	1.00	48.19	C
ATOM	16676	CD2	LEU	C	287	29.854	33.410	57.786	1.00	49.68	C
ATOM	16680	C	LEU	C	287	27.750	37.322	59.116	1.00	41.05	C
ATOM	16681	O	LEU	C	287	27.724	38.435	58.705	1.00	45.70	O
ATOM	16682	N	MET	C	288	27.578	36.981	60.370	1.00	48.49	N
ATOM	16684	CA	MET	C	288	27.201	37.884	61.414	1.00	50.98	C
ATOM	16686	CB	MET	C	288	26.743	37.033	62.614	1.00	53.16	C
ATOM	16689	CG	MET	C	288	26.255	37.824	63.814	1.00	59.82	C
ATOM	16692	SD	MET	C	288	25.588	36.852	65.181	1.00	66.84	S
ATOM	16693	CE	MET	C	288	24.400	35.852	64.340	1.00	65.00	C
ATOM	16697	C	MET	C	288	28.448	38.645	61.724	1.00	52.60	C
ATOM	16698	O	MET	C	288	29.541	38.109	61.660	1.00	49.84	O
ATOM	16699	N	GLY	C	289	28.298	39.906	62.056	1.00	53.80	N
ATOM	16601	CA	GLY	C	289	29.458	40.726	62.323	1.00	53.77	C
ATOM	16604	C	GLY	C	289	29.552	41.029	63.794	1.00	52.86	C
ATOM	16605	O	GLY	C	289	28.759	40.561	64.560	1.00	55.64	O
ATOM	16606	N	GLU	C	290	30.527	41.828	64.185	1.00	59.63	N
ATOM	16608	CA	GLU	C	290	30.713	42.194	65.586	1.00	62.62	C
ATOM	16610	CB	GLU	C	290	32.131	42.676	65.770	1.00	61.72	C
ATOM	16613	CG	GLU	C	290	33.118	41.620	65.403	1.00	56.49	C
ATOM	16616	CD	GLU	C	290	34.316	41.728	66.263	1.00	62.75	C
ATOM	16617	OE1	GLU	C	290	35.173	42.598	65.952	1.00	66.45	O
ATOM	16618	OE2	GLU	C	290	34.368	40.951	67.245	1.00	58.63	O
ATOM	16619	C	GLU	C	290	29.799	43.253	66.185	1.00	66.84	C
ATOM	16620	O	GLU	C	290	29.553	43.241	67.411	1.00	65.72	O
ATOM	16621	N	VAL	C	291	29.309	44.171	65.356	1.00	71.13	N
ATOM	16623	CA	VAL	C	291	28.433	45.221	65.869	1.00	74.55	C
ATOM	16625	CB	VAL	C	291	28.539	46.525	65.086	1.00	76.24	C
ATOM	16627	CG1	VAL	C	291	27.577	47.563	65.658	1.00	76.47	C
ATOM	16631	CG2	VAL	C	291	29.953	47.059	65.150	1.00	81.20	C
ATOM	16635	C	VAL	C	291	27.003	44.778	65.840	1.00	75.19	C
ATOM	16636	O	VAL	C	291	26.553	44.138	64.875	1.00	76.87	O
ATOM	16637	N	THR	C	292	26.299	45.129	66.912	1.00	76.63	N
ATOM	16639	CA	THR	C	292	24.884	44.803	67.090	1.00	78.73	C
ATOM	16641	CB	THR	C	292	24.380	45.595	68.298	1.00	79.80	C
ATOM	16643	OG1	THR	C	292	25.508	46.083	69.035	1.00	83.48	O

ATOM	16645	CG2	THR	C	292	23.660	44.683	69.301	1.00	82.75	C
ATOM	16649	C	THR	C	292	24.039	45.118	65.842	1.00	78.20	C
ATOM	16650	O	THR	C	292	24.152	46.206	65.281	1.00	76.52	O
ATOM	16651	N	GLN	C	293	23.212	44.153	65.414	1.00	77.10	N
ATOM	16653	CA	GLN	C	293	22.352	44.280	64.223	1.00	73.84	C
ATOM	16655	CB	GLN	C	293	21.520	45.562	64.352	1.00	79.00	C
ATOM	16658	CG	GLN	C	293	20.073	45.347	64.881	1.00	85.11	C
ATOM	16661	CD	GLN	C	293	19.749	46.139	66.165	1.00	87.31	C
ATOM	16662	OE1	GLN	C	293	18.960	45.672	67.007	1.00	85.12	O
ATOM	16663	NE2	GLN	C	293	20.347	47.329	66.308	1.00	86.21	N
ATOM	16666	C	GLN	C	293	23.045	44.268	62.842	1.00	65.85	C
ATOM	16667	O	GLN	C	293	22.370	44.359	61.822	1.00	63.96	O
ATOM	16668	N	GLN	C	294	24.366	44.120	62.803	1.00	66.61	N
ATOM	16670	CA	GLN	C	294	25.141	44.364	61.580	1.00	61.35	C
ATOM	16672	CB	GLN	C	294	26.324	45.288	61.936	1.00	60.41	C
ATOM	16675	CG	GLN	C	294	26.837	46.202	60.839	1.00	62.21	C
ATOM	16678	CD	GLN	C	294	27.669	47.413	61.365	1.00	65.59	C
ATOM	16679	OE1	GLN	C	294	28.765	47.713	60.847	1.00	59.99	O
ATOM	16680	NE2	GLN	C	294	27.138	48.107	62.373	1.00	65.49	N
ATOM	16683	C	GLN	C	294	25.627	43.036	60.985	1.00	56.94	C
ATOM	16684	O	GLN	C	294	25.912	42.085	61.710	1.00	58.82	O
ATOM	16685	N	SER	C	295	25.718	42.958	59.668	1.00	46.60	N
ATOM	16687	CA	SER	C	295	26.213	41.760	59.056	1.00	42.55	C
ATOM	16689	CB	SER	C	295	25.079	40.909	58.628	1.00	40.84	C
ATOM	16692	OG	SER	C	295	24.697	41.439	57.411	1.00	43.82	O
ATOM	16694	C	SER	C	295	26.965	42.103	57.806	1.00	44.01	C
ATOM	16695	O	SER	C	295	26.877	43.217	57.316	1.00	41.78	O
ATOM	16696	N	PHE	C	296	27.688	41.133	57.260	1.00	40.42	N
ATOM	16698	CA	PHE	C	296	28.455	41.395	56.077	1.00	40.53	C
ATOM	16700	CB	PHE	C	296	29.870	41.876	56.413	1.00	42.71	C
ATOM	16703	CG	PHE	C	296	30.782	40.825	56.974	1.00	40.05	C
ATOM	16704	CD1	PHE	C	296	31.588	40.081	56.147	1.00	43.51	C
ATOM	16706	CE1	PHE	C	296	32.406	39.148	56.647	1.00	36.06	C
ATOM	16708	CZ	PHE	C	296	32.443	38.940	58.011	1.00	42.47	C
ATOM	16710	CE2	PHE	C	296	31.674	39.657	58.822	1.00	37.71	C
ATOM	16712	CD2	PHE	C	296	30.848	40.602	58.315	1.00	37.78	C
ATOM	16714	C	PHE	C	296	28.455	40.127	55.332	1.00	42.08	C
ATOM	16715	O	PHE	C	296	28.030	39.122	55.906	1.00	46.21	O
ATOM	16716	N	ARG	C	297	28.908	40.167	54.070	1.00	40.78	N
ATOM	16718	CA	ARG	C	297	28.958	38.974	53.211	1.00	44.56	C
ATOM	16720	CB	ARG	C	297	27.894	39.031	52.123	1.00	44.33	C
ATOM	16723	CG	ARG	C	297	28.197	40.056	51.064	1.00	50.40	C
ATOM	16726	CD	ARG	C	297	27.009	40.427	50.181	1.00	54.77	C
ATOM	16729	NE	ARG	C	297	27.370	41.445	49.195	1.00	56.04	N
ATOM	16731	CZ	ARG	C	297	26.505	42.187	48.535	1.00	50.69	C
ATOM	16732	NH1	ARG	C	297	25.204	42.040	48.732	1.00	51.47	N
ATOM	16735	NH2	ARG	C	297	26.946	43.079	47.677	1.00	46.53	N
ATOM	16738	C	ARG	C	297	30.273	38.740	52.498	1.00	42.25	C
ATOM	16739	O	ARG	C	297	31.035	39.648	52.215	1.00	47.66	O
ATOM	16740	N	ILE	C	298	30.518	37.488	52.194	1.00	41.06	N
ATOM	16742	CA	ILE	C	298	31.679	37.115	51.439	1.00	41.71	C
ATOM	16744	CB	ILE	C	298	32.517	36.104	52.264	1.00	38.04	C
ATOM	16746	CG1	ILE	C	298	31.858	34.741	52.331	1.00	39.06	C
ATOM	16749	CD1	ILE	C	298	32.459	33.774	53.357	1.00	42.84	C
ATOM	16753	CG2	ILE	C	298	32.654	36.628	53.672	1.00	37.72	C
ATOM	16757	C	ILE	C	298	31.051	36.559	50.189	1.00	36.43	C
ATOM	16758	O	ILE	C	298	29.989	35.993	50.268	1.00	39.29	O

ATOM	16759	N	THR	C	299	31.675	36.727	49.041	1.00	41.37	N
ATOM	16761	CA	THR	C	299	31.098	36.225	47.769	1.00	42.98	C
ATOM	16763	CB	THR	C	299	30.626	37.411	46.893	1.00	44.37	C
ATOM	16765	OG1	THR	C	299	30.064	38.411	47.749	1.00	48.01	O
ATOM	16767	CG2	THR	C	299	29.455	37.062	45.991	1.00	45.15	C
ATOM	16771	C	THR	C	299	32.163	35.478	47.050	1.00	38.51	C
ATOM	16772	O	THR	C	299	33.282	35.947	46.931	1.00	38.31	O
ATOM	16773	N	ILE	C	300	31.834	34.309	46.557	1.00	40.54	N
ATOM	16775	CA	ILE	C	300	32.849	33.494	45.920	1.00	40.34	C
ATOM	16777	CB	ILE	C	300	33.019	32.177	46.685	1.00	40.87	C
ATOM	16779	CG1	ILE	C	300	32.051	31.162	46.204	1.00	34.13	C
ATOM	16782	CD1	ILE	C	300	32.254	29.851	46.922	1.00	36.30	C
ATOM	16786	CG2	ILE	C	300	32.721	32.317	48.186	1.00	44.16	C
ATOM	16790	C	ILE	C	300	32.440	33.216	44.505	1.00	40.76	C
ATOM	16791	O	ILE	C	300	31.254	33.277	44.220	1.00	39.41	O
ATOM	16792	N	LEU	C	301	33.426	32.905	43.645	1.00	44.04	N
ATOM	16794	CA	LEU	C	301	33.215	32.633	42.210	1.00	45.48	C
ATOM	16796	CB	LEU	C	301	34.199	33.429	41.340	1.00	47.46	C
ATOM	16799	CG	LEU	C	301	34.544	34.876	41.679	1.00	50.30	C
ATOM	16801	CD1	LEU	C	301	35.649	35.402	40.734	1.00	51.91	C
ATOM	16805	CD2	LEU	C	301	33.312	35.727	41.580	1.00	48.11	C
ATOM	16809	C	LEU	C	301	33.338	31.183	41.734	1.00	46.00	C
ATOM	16810	O	LEU	C	301	33.844	30.283	42.386	1.00	40.23	O
ATOM	16811	N	PRO	C	302	32.905	30.973	40.516	1.00	47.02	N
ATOM	16812	CA	PRO	C	302	32.898	29.626	39.965	1.00	45.68	C
ATOM	16814	CB	PRO	C	302	32.276	29.806	38.584	1.00	43.48	C
ATOM	16817	CG	PRO	C	302	31.796	31.181	38.541	1.00	45.27	C
ATOM	16820	CD	PRO	C	302	32.456	31.994	39.567	1.00	42.09	C
ATOM	16823	C	PRO	C	302	34.331	29.104	39.891	1.00	48.54	C
ATOM	16824	O	PRO	C	302	34.534	27.886	39.845	1.00	49.42	O
ATOM	16825	N	GLN	C	303	35.309	30.014	39.873	1.00	47.34	N
ATOM	16827	CA	GLN	C	303	36.708	29.610	39.973	1.00	47.58	C
ATOM	16829	CB	GLN	C	303	37.637	30.790	39.736	1.00	47.37	C
ATOM	16832	CG	GLN	C	303	37.910	31.131	38.293	1.00	45.62	C
ATOM	16835	CD	GLN	C	303	36.936	32.113	37.717	1.00	45.06	C
ATOM	16836	OE1	GLN	C	303	35.838	32.299	38.244	1.00	37.43	O
ATOM	16837	NE2	GLN	C	303	37.334	32.747	36.617	1.00	50.52	N
ATOM	16840	C	GLN	C	303	37.068	28.996	41.346	1.00	49.02	C
ATOM	16841	O	GLN	C	303	38.159	28.473	41.514	1.00	51.60	O
ATOM	16842	N	GLN	C	304	36.169	29.052	42.316	1.00	49.47	N
ATOM	16844	CA	GLN	C	304	36.438	28.475	43.616	1.00	50.38	C
ATOM	16846	CB	GLN	C	304	36.269	29.511	44.737	1.00	52.45	C
ATOM	16849	CG	GLN	C	304	37.510	30.399	44.949	1.00	50.66	C
ATOM	16852	CD	GLN	C	304	37.438	31.671	44.151	1.00	51.45	C
ATOM	16853	OE1	GLN	C	304	38.235	31.881	43.210	1.00	51.29	O
ATOM	16854	NE2	GLN	C	304	36.484	32.532	44.509	1.00	40.58	N
ATOM	16857	C	GLN	C	304	35.606	27.249	43.939	1.00	51.95	C
ATOM	16858	O	GLN	C	304	36.120	26.322	44.554	1.00	55.44	O
ATOM	16859	N	TYR	C	305	34.328	27.212	43.574	1.00	56.29	N
ATOM	16861	CA	TYR	C	305	33.569	25.956	43.788	1.00	52.77	C
ATOM	16863	CB	TYR	C	305	32.064	26.151	44.100	1.00	50.80	C
ATOM	16866	CG	TYR	C	305	31.206	26.929	43.131	1.00	44.82	C
ATOM	16867	CD1	TYR	C	305	30.417	26.271	42.212	1.00	44.88	C
ATOM	16869	CE1	TYR	C	305	29.642	26.928	41.352	1.00	35.09	C
ATOM	16871	CZ	TYR	C	305	29.594	28.271	41.368	1.00	36.83	C
ATOM	16872	OH	TYR	C	305	28.748	28.910	40.445	1.00	41.33	O
ATOM	16874	CE2	TYR	C	305	30.352	28.964	42.269	1.00	37.21	C

ATOM	16876	CD2	TYR	C	305	31.149	28.290	43.155	1.00	38.78	C
ATOM	16878	C	TYR	C	305	33.788	24.886	42.730	1.00	51.03	C
ATOM	16879	O	TYR	C	305	33.369	23.774	42.952	1.00	53.32	O
ATOM	16880	N	LEU	C	306	34.465	25.192	41.618	1.00	52.84	N
ATOM	16882	CA	LEU	C	306	34.720	24.182	40.568	1.00	52.04	C
ATOM	16884	CB	LEU	C	306	34.395	24.713	39.181	1.00	54.77	C
ATOM	16887	CG	LEU	C	306	32.909	24.805	38.761	1.00	51.54	C
ATOM	16889	CD1	LEU	C	306	32.752	25.575	37.502	1.00	44.63	C
ATOM	16893	CD2	LEU	C	306	32.350	23.442	38.555	1.00	52.67	C
ATOM	16897	C	LEU	C	306	36.187	23.850	40.620	1.00	56.99	C
ATOM	16898	O	LEU	C	306	37.008	24.666	40.199	1.00	57.98	O
ATOM	16899	N	ARG	C	307	36.518	22.648	41.110	1.00	54.03	N
ATOM	16901	CA	ARG	C	307	37.888	22.323	41.457	1.00	54.93	C
ATOM	16903	CB	ARG	C	307	37.877	21.401	42.707	1.00	50.67	C
ATOM	16906	CG	ARG	C	307	39.207	20.794	43.096	1.00	51.43	C
ATOM	16909	CD	ARG	C	307	39.237	20.023	44.478	1.00	52.58	C
ATOM	16912	NE	ARG	C	307	38.527	18.734	44.515	1.00	50.63	N
ATOM	16914	CZ	ARG	C	307	38.946	17.609	43.939	1.00	47.81	C
ATOM	16915	NH1	ARG	C	307	40.080	17.545	43.245	1.00	43.86	N
ATOM	16918	NH2	ARG	C	307	38.217	16.525	44.053	1.00	50.54	N
ATOM	16921	C	ARG	C	307	38.629	21.735	40.241	1.00	58.15	C
ATOM	16922	O	ARG	C	307	38.176	20.778	39.624	1.00	66.15	O
ATOM	16923	N	PRO	C	308	39.755	22.318	39.870	1.00	59.79	N
ATOM	16924	CA	PRO	C	308	40.546	21.788	38.744	1.00	59.10	C
ATOM	16926	CB	PRO	C	308	41.640	22.856	38.523	1.00	56.70	C
ATOM	16929	CG	PRO	C	308	41.396	23.964	39.500	1.00	56.84	C
ATOM	16932	CD	PRO	C	308	40.358	23.515	40.488	1.00	59.81	C
ATOM	16935	C	PRO	C	308	41.210	20.429	39.057	1.00	57.82	C
ATOM	16936	O	PRO	C	308	41.842	20.326	40.111	1.00	54.21	O
ATOM	16937	N	VAL	C	309	41.077	19.441	38.160	1.00	58.91	N
ATOM	16939	CA	VAL	C	309	41.652	18.095	38.319	1.00	63.76	C
ATOM	16941	CB	VAL	C	309	40.551	17.114	38.722	1.00	65.79	C
ATOM	16943	CG1	VAL	C	309	39.588	17.770	39.716	1.00	66.84	C
ATOM	16947	CG2	VAL	C	309	39.779	16.616	37.484	1.00	67.52	C
ATOM	16951	C	VAL	C	309	42.356	17.527	37.044	1.00	69.36	C
ATOM	16952	O	VAL	C	309	42.656	18.262	36.125	1.00	69.68	O
ATOM	16953	N	GLU	C	310	42.636	16.222	37.004	1.00	77.12	N
ATOM	16955	CA	GLU	C	310	43.239	15.577	35.811	1.00	82.03	C
ATOM	16957	CB	GLU	C	310	44.374	14.638	36.233	1.00	81.97	C
ATOM	16960	CG	GLU	C	310	45.621	15.401	36.593	1.00	81.89	C
ATOM	16963	CD	GLU	C	310	45.544	16.821	36.063	1.00	80.73	C
ATOM	16964	OE1	GLU	C	310	45.101	17.697	36.831	1.00	76.33	O
ATOM	16965	OE2	GLU	C	310	45.908	17.048	34.889	1.00	75.15	O
ATOM	16966	C	GLU	C	310	42.302	14.768	34.903	1.00	87.34	C
ATOM	16967	O	GLU	C	310	41.793	13.708	35.306	1.00	84.75	O
ATOM	16968	N	ASP	C	311	42.089	15.239	33.670	1.00	93.03	N
ATOM	16970	CA	ASP	C	311	41.249	14.483	32.746	1.00	97.25	C
ATOM	16972	CB	ASP	C	311	41.259	15.044	31.311	1.00	99.29	C
ATOM	16975	CG	ASP	C	311	40.444	14.163	30.329	1.00	101.77	C
ATOM	16976	OD1	ASP	C	311	40.021	13.036	30.712	1.00	101.63	O
ATOM	16977	OD2	ASP	C	311	40.179	14.507	29.156	1.00	96.73	O
ATOM	16978	C	ASP	C	311	41.744	13.036	32.777	1.00	98.09	C
ATOM	16979	O	ASP	C	311	42.917	12.770	33.052	1.00	98.48	O
ATOM	16980	N	VAL	C	312	40.840	12.109	32.493	1.00	100.23	N
ATOM	16982	CA	VAL	C	312	41.132	10.686	32.624	1.00	101.33	C
ATOM	16984	CB	VAL	C	312	39.948	9.830	32.120	1.00	101.66	C
ATOM	16986	CG1	VAL	C	312	40.264	8.348	32.290	1.00	102.68	C

ATOM	16990	CG2	VAL	C	312	38.650	10.202	32.861	1.00	100.40	C
ATOM	16994	C	VAL	C	312	42.428	10.292	31.906	1.00	101.68	C
ATOM	16995	O	VAL	C	312	43.435	9.972	32.560	1.00	102.27	O
ATOM	16996	N	ALA	C	313	42.397	10.320	30.571	1.00	99.43	N
ATOM	16998	CA	ALA	C	313	43.564	9.986	29.760	1.00	96.81	C
ATOM	17000	CB	ALA	C	313	43.127	9.454	28.395	1.00	95.91	C
ATOM	17004	C	ALA	C	313	44.444	11.222	29.625	1.00	96.79	C
ATOM	17005	O	ALA	C	313	45.096	11.442	28.606	1.00	98.26	O
ATOM	17006	N	THR	C	314	44.434	12.009	30.703	1.00	97.05	N
ATOM	17008	CA	THR	C	314	45.147	13.297	30.885	1.00	96.61	C
ATOM	17010	CB	THR	C	314	46.635	12.993	31.175	1.00	95.85	C
ATOM	17012	OG1	THR	C	314	47.210	12.241	30.101	1.00	94.24	O
ATOM	17014	CG2	THR	C	314	46.755	12.067	32.397	1.00	97.66	C
ATOM	17018	C	THR	C	314	45.031	14.507	29.891	1.00	97.32	C
ATOM	17019	O	THR	C	314	45.827	15.447	29.999	1.00	99.24	O
ATOM	17020	N	SER	C	315	44.056	14.526	28.976	1.00	94.94	N
ATOM	17022	CA	SER	C	315	43.911	15.601	27.933	1.00	94.95	C
ATOM	17024	CB	SER	C	315	42.513	15.511	27.298	1.00	94.81	C
ATOM	17027	OG	SER	C	315	42.361	16.442	26.233	1.00	93.24	O
ATOM	17029	C	SER	C	315	44.158	17.114	28.237	1.00	93.29	C
ATOM	17030	O	SER	C	315	44.341	17.532	29.385	1.00	90.39	O
ATOM	17031	N	GLN	C	316	44.140	17.903	27.154	1.00	92.77	N
ATOM	17033	CA	GLN	C	316	44.289	19.362	27.190	1.00	93.00	C
ATOM	17035	CB	GLN	C	316	45.171	19.847	26.011	1.00	91.78	C
ATOM	17038	CG	GLN	C	316	46.679	19.416	26.098	1.00	93.54	C
ATOM	17041	CD	GLN	C	316	47.522	19.699	24.810	1.00	93.70	C
ATOM	17042	OE1	GLN	C	316	47.456	20.789	24.226	1.00	91.79	O
ATOM	17043	NE2	GLN	C	316	48.314	18.712	24.392	1.00	88.27	N
ATOM	17046	C	GLN	C	316	42.911	20.123	27.252	1.00	92.97	C
ATOM	17047	O	GLN	C	316	42.855	21.333	27.012	1.00	97.12	O
ATOM	17048	N	ASP	C	317	41.813	19.414	27.541	1.00	88.86	N
ATOM	17050	CA	ASP	C	317	40.545	20.057	27.925	1.00	85.72	C
ATOM	17052	CB	ASP	C	317	39.341	19.120	27.813	1.00	89.42	C
ATOM	17055	CG	ASP	C	317	39.375	18.237	26.588	1.00	93.20	C
ATOM	17056	OD1	ASP	C	317	39.976	18.629	25.560	1.00	97.12	O
ATOM	17057	OD2	ASP	C	317	38.806	17.125	26.583	1.00	93.67	O
ATOM	17058	C	ASP	C	317	40.650	20.378	29.414	1.00	81.00	C
ATOM	17059	O	ASP	C	317	41.068	19.527	30.190	1.00	76.59	O
ATOM	17060	N	ASP	C	318	40.260	21.571	29.843	1.00	76.29	N
ATOM	17062	CA	ASP	C	318	40.389	21.894	31.257	1.00	69.79	C
ATOM	17064	CB	ASP	C	318	40.429	23.405	31.434	1.00	70.73	C
ATOM	17067	CG	ASP	C	318	41.656	24.001	30.798	1.00	75.33	C
ATOM	17068	OD1	ASP	C	318	41.776	25.257	30.699	1.00	80.77	O
ATOM	17069	OD2	ASP	C	318	42.561	23.260	30.360	1.00	79.35	O
ATOM	17070	C	ASP	C	318	39.268	21.199	32.037	1.00	63.07	C
ATOM	17071	O	ASP	C	318	38.103	21.409	31.755	1.00	54.32	O
ATOM	17072	N	CYS	C	319	39.624	20.356	33.005	1.00	61.35	N
ATOM	17074	CA	CYS	C	319	38.611	19.604	33.753	1.00	62.73	C
ATOM	17076	CB	CYS	C	319	39.002	18.138	33.789	1.00	67.00	C
ATOM	17079	SG	CYS	C	319	39.025	17.347	32.147	1.00	71.83	S
ATOM	17080	C	CYS	C	319	38.309	20.122	35.176	1.00	60.27	C
ATOM	17081	O	CYS	C	319	39.157	20.741	35.825	1.00	57.82	O
ATOM	17082	N	TYR	C	320	37.089	19.870	35.652	1.00	53.68	N
ATOM	17084	CA	TYR	C	320	36.675	20.393	36.939	1.00	49.77	C
ATOM	17086	CB	TYR	C	320	35.945	21.709	36.677	1.00	50.01	C
ATOM	17089	CG	TYR	C	320	36.861	22.674	35.958	1.00	48.43	C
ATOM	17090	CD1	TYR	C	320	36.774	22.878	34.601	1.00	45.90	C

ATOM	17092	CE1	TYR	C	320	37.633	23.740	33.956	1.00	45.11	C
ATOM	17094	CZ	TYR	C	320	38.584	24.406	34.665	1.00	42.05	C
ATOM	17095	OH	TYR	C	320	39.464	25.286	34.063	1.00	41.52	O
ATOM	17097	CE2	TYR	C	320	38.678	24.213	36.008	1.00	49.88	C
ATOM	17099	CD2	TYR	C	320	37.824	23.357	36.645	1.00	48.03	C
ATOM	17101	C	TYR	C	320	35.796	19.427	37.713	1.00	50.65	C
ATOM	17102	O	TYR	C	320	35.243	18.517	37.104	1.00	50.64	O
ATOM	17103	N	LYS	C	321	35.681	19.611	39.042	1.00	48.99	N
ATOM	17105	CA	LYS	C	321	34.718	18.851	39.874	1.00	48.57	C
ATOM	17107	CB	LYS	C	321	35.394	17.846	40.803	1.00	51.22	C
ATOM	17110	CG	LYS	C	321	35.994	16.592	40.130	1.00	59.14	C
ATOM	17113	CD	LYS	C	321	36.034	15.363	41.092	1.00	60.36	C
ATOM	17116	CE	LYS	C	321	36.528	14.083	40.379	1.00	61.02	C
ATOM	17119	NZ	LYS	C	321	36.887	12.972	41.327	1.00	60.51	N
ATOM	17123	C	LYS	C	321	33.894	19.787	40.756	1.00	43.89	C
ATOM	17124	O	LYS	C	321	34.388	20.685	41.391	1.00	48.32	O
ATOM	17125	N	PHE	C	322	32.614	19.570	40.806	1.00	45.71	N
ATOM	17127	CA	PHE	C	322	31.772	20.381	41.647	1.00	45.11	C
ATOM	17129	CB	PHE	C	322	30.325	19.886	41.516	1.00	39.38	C
ATOM	17132	CG	PHE	C	322	29.275	20.890	41.937	1.00	47.52	C
ATOM	17133	CD1	PHE	C	322	29.280	22.186	41.454	1.00	52.42	C
ATOM	17135	CE1	PHE	C	322	28.318	23.066	41.839	1.00	46.38	C
ATOM	17137	CZ	PHE	C	322	27.334	22.671	42.708	1.00	41.85	C
ATOM	17139	CE2	PHE	C	322	27.315	21.436	43.176	1.00	38.98	C
ATOM	17141	CD2	PHE	C	322	28.266	20.535	42.801	1.00	38.92	C
ATOM	17143	C	PHE	C	322	32.331	20.143	43.041	1.00	46.56	C
ATOM	17144	O	PHE	C	322	32.334	18.998	43.496	1.00	55.34	O
ATOM	17145	N	ALA	C	323	32.827	21.180	43.713	1.00	40.68	N
ATOM	17147	CA	ALA	C	323	33.267	21.030	45.100	1.00	36.91	C
ATOM	17149	CB	ALA	C	323	34.573	21.721	45.298	1.00	40.42	C
ATOM	17153	C	ALA	C	323	32.266	21.542	46.125	1.00	36.58	C
ATOM	17154	O	ALA	C	323	32.636	22.208	47.080	1.00	37.20	O
ATOM	17155	N	ILE	C	324	30.989	21.267	45.943	1.00	37.33	N
ATOM	17157	CA	ILE	C	324	30.015	21.630	46.965	1.00	36.19	C
ATOM	17159	CB	ILE	C	324	29.023	22.599	46.424	1.00	39.76	C
ATOM	17161	CG1	ILE	C	324	29.739	23.761	45.817	1.00	38.88	C
ATOM	17164	CD1	ILE	C	324	28.812	24.873	45.598	1.00	45.35	C
ATOM	17168	CG2	ILE	C	324	28.083	23.152	47.527	1.00	42.74	C
ATOM	17172	C	ILE	C	324	29.353	20.321	47.267	1.00	41.52	C
ATOM	17173	O	ILE	C	324	29.381	19.453	46.389	1.00	48.29	O
ATOM	17174	N	SER	C	325	28.788	20.145	48.473	1.00	43.90	N
ATOM	17176	CA	SER	C	325	28.161	18.864	48.868	1.00	44.02	C
ATOM	17178	CB	SER	C	325	29.154	17.696	48.881	1.00	45.54	C
ATOM	17181	OG	SER	C	325	30.435	18.073	49.334	1.00	56.81	O
ATOM	17183	C	SER	C	325	27.410	18.846	50.181	1.00	49.43	C
ATOM	17184	O	SER	C	325	27.528	19.750	51.015	1.00	54.04	O
ATOM	17185	N	GLN	C	326	26.624	17.786	50.339	1.00	55.37	N
ATOM	17187	CA	GLN	C	326	25.797	17.593	51.509	1.00	59.34	C
ATOM	17189	CB	GLN	C	326	24.512	16.803	51.166	1.00	62.25	C
ATOM	17192	CG	GLN	C	326	24.703	15.342	50.735	1.00	66.34	C
ATOM	17195	CD	GLN	C	326	23.421	14.731	50.154	1.00	73.31	C
ATOM	17196	OE1	GLN	C	326	22.481	14.464	50.899	1.00	75.42	O
ATOM	17197	NE2	GLN	C	326	23.388	14.511	48.826	1.00	73.17	N
ATOM	17200	C	GLN	C	326	26.568	16.965	52.682	1.00	60.65	C
ATOM	17201	O	GLN	C	326	27.603	16.287	52.522	1.00	58.34	O
ATOM	17202	N	SER	C	327	26.017	17.211	53.862	1.00	60.79	N
ATOM	17204	CA	SER	C	327	26.599	16.804	55.118	1.00	58.82	C

ATOM	17206	CB	SER	C	327	27.625	17.830	55.574	1.00	59.51	C
ATOM	17209	OG	SER	C	327	27.685	17.900	57.003	1.00	64.04	O
ATOM	17211	C	SER	C	327	25.482	16.698	56.153	1.00	58.47	C
ATOM	17212	O	SER	C	327	24.390	17.271	56.006	1.00	55.40	O
ATOM	17213	N	SER	C	328	25.771	15.949	57.197	1.00	56.87	N
ATOM	17215	CA	SER	C	328	24.812	15.697	58.242	1.00	55.69	C
ATOM	17217	CB	SER	C	328	24.601	14.209	58.396	1.00	56.03	C
ATOM	17220	OG	SER	C	328	25.854	13.578	58.688	1.00	57.06	O
ATOM	17222	C	SER	C	328	25.423	16.268	59.490	1.00	57.40	C
ATOM	17223	O	SER	C	328	24.834	16.198	60.576	1.00	60.77	O
ATOM	17224	N	THR	C	329	26.615	16.839	59.341	1.00	53.35	N
ATOM	17226	CA	THR	C	329	27.213	17.541	60.450	1.00	51.27	C
ATOM	17228	CB	THR	C	329	28.454	16.818	60.897	1.00	51.43	C
ATOM	17230	OG1	THR	C	329	29.278	16.560	59.768	1.00	42.60	O
ATOM	17232	CG2	THR	C	329	28.078	15.427	61.365	1.00	56.80	C
ATOM	17236	C	THR	C	329	27.466	19.007	60.149	1.00	48.82	C
ATOM	17237	O	THR	C	329	28.537	19.544	60.411	1.00	59.16	O
ATOM	17238	N	GLY	C	330	26.450	19.642	59.581	1.00	46.96	N
ATOM	17240	CA	GLY	C	330	26.372	21.083	59.478	1.00	34.71	C
ATOM	17243	C	GLY	C	330	27.118	21.538	58.279	1.00	32.91	C
ATOM	17244	O	GLY	C	330	27.478	20.707	57.498	1.00	31.32	O
ATOM	17245	N	THR	C	331	27.331	22.847	58.173	1.00	38.41	N
ATOM	17247	CA	THR	C	331	28.081	23.522	57.123	1.00	40.14	C
ATOM	17249	CB	THR	C	331	27.719	25.039	57.137	1.00	44.49	C
ATOM	17251	OG1	THR	C	331	26.332	25.263	56.874	1.00	47.97	O
ATOM	17253	CG2	THR	C	331	28.457	25.793	56.054	1.00	45.87	C
ATOM	17257	C	THR	C	331	29.560	23.524	57.507	1.00	43.45	C
ATOM	17258	O	THR	C	331	29.904	23.749	58.675	1.00	41.19	O
ATOM	17259	N	VAL	C	332	30.416	23.306	56.515	1.00	39.96	N
ATOM	17261	CA	VAL	C	332	31.828	23.320	56.680	1.00	35.05	C
ATOM	17263	CB	VAL	C	332	32.397	21.988	56.442	1.00	34.40	C
ATOM	17265	CG1	VAL	C	332	33.907	22.017	56.732	1.00	32.26	C
ATOM	17269	CG2	VAL	C	332	31.704	21.009	57.307	1.00	35.49	C
ATOM	17273	C	VAL	C	332	32.330	24.187	55.583	1.00	41.57	C
ATOM	17274	O	VAL	C	332	32.169	23.850	54.413	1.00	41.46	O
ATOM	17275	N	MET	C	333	32.918	25.314	55.956	1.00	43.32	N
ATOM	17277	CA	MET	C	333	33.419	26.236	54.977	1.00	46.33	C
ATOM	17279	CB	MET	C	333	33.426	27.663	55.549	1.00	48.59	C
ATOM	17282	CG	MET	C	333	32.239	28.470	55.227	1.00	48.65	C
ATOM	17285	SD	MET	C	333	31.907	29.702	56.521	1.00	59.78	S
ATOM	17286	CE	MET	C	333	32.913	30.942	55.931	1.00	59.17	C
ATOM	17290	C	MET	C	333	34.832	25.758	54.612	1.00	48.03	C
ATOM	17291	O	MET	C	333	35.809	26.193	55.201	1.00	42.88	O
ATOM	17292	N	GLY	C	334	34.915	24.862	53.635	1.00	48.50	N
ATOM	17294	CA	GLY	C	334	36.160	24.240	53.247	1.00	52.01	C
ATOM	17297	C	GLY	C	334	37.161	25.091	52.503	1.00	53.89	C
ATOM	17298	O	GLY	C	334	37.081	26.315	52.511	1.00	58.04	O
ATOM	17299	N	ALA	C	335	38.112	24.424	51.850	1.00	51.10	N
ATOM	17301	CA	ALA	C	335	39.176	25.126	51.170	1.00	50.84	C
ATOM	17303	CB	ALA	C	335	40.226	24.164	50.669	1.00	51.11	C
ATOM	17307	C	ALA	C	335	38.671	25.963	50.024	1.00	53.88	C
ATOM	17308	O	ALA	C	335	39.280	26.975	49.655	1.00	58.46	O
ATOM	17309	N	VAL	C	336	37.566	25.592	49.424	1.00	52.66	N
ATOM	17311	CA	VAL	C	336	37.223	26.366	48.255	1.00	56.89	C
ATOM	17313	CB	VAL	C	336	36.226	25.654	47.316	1.00	57.19	C
ATOM	17315	CG1	VAL	C	336	36.745	24.245	46.966	1.00	56.50	C
ATOM	17319	CG2	VAL	C	336	34.848	25.609	47.913	1.00	59.09	C

ATOM	17323	C	VAL	C	336	36.767	27.738	48.727	1.00	57.63	C
ATOM	17324	O	VAL	C	336	36.957	28.725	48.038	1.00	60.05	O
ATOM	17325	N	ILE	C	337	36.198	27.799	49.915	1.00	53.26	N
ATOM	17327	CA	ILE	C	337	35.714	29.050	50.421	1.00	54.88	C
ATOM	17329	CB	ILE	C	337	34.812	28.821	51.617	1.00	59.97	C
ATOM	17331	CG1	ILE	C	337	33.605	28.021	51.167	1.00	62.66	C
ATOM	17334	CD1	ILE	C	337	33.536	27.873	49.654	1.00	65.75	C
ATOM	17338	CG2	ILE	C	337	34.416	30.142	52.257	1.00	61.20	C
ATOM	17342	C	ILE	C	337	36.884	29.853	50.861	1.00	55.72	C
ATOM	17343	O	ILE	C	337	36.885	31.076	50.754	1.00	60.34	O
ATOM	17344	N	MET	C	338	37.893	29.168	51.373	1.00	52.85	N
ATOM	17346	CA	MET	C	338	39.058	29.859	51.874	1.00	45.91	C
ATOM	17348	CB	MET	C	338	39.791	28.921	52.798	1.00	47.20	C
ATOM	17351	CG	MET	C	338	39.048	28.822	54.095	1.00	46.36	C
ATOM	17354	SD	MET	C	338	39.827	27.707	55.154	1.00	50.06	S
ATOM	17355	CE	MET	C	338	41.323	28.450	55.484	1.00	38.59	C
ATOM	17359	C	MET	C	338	39.946	30.388	50.744	1.00	42.52	C
ATOM	17360	O	MET	C	338	40.483	31.476	50.842	1.00	47.16	O
ATOM	17361	N	GLU	C	339	40.093	29.619	49.685	1.00	36.78	N
ATOM	17363	CA	GLU	C	339	40.815	30.034	48.514	1.00	37.17	C
ATOM	17365	CB	GLU	C	339	40.806	28.877	47.493	1.00	43.92	C
ATOM	17368	CG	GLU	C	339	41.688	27.679	47.897	1.00	48.10	C
ATOM	17371	CD	GLU	C	339	41.673	26.490	46.918	1.00	50.53	C
ATOM	17372	OE1	GLU	C	339	42.111	25.367	47.340	1.00	46.87	O
ATOM	17373	OE2	GLU	C	339	41.232	26.671	45.751	1.00	41.22	O
ATOM	17374	C	GLU	C	339	40.279	31.374	47.900	1.00	39.02	C
ATOM	17375	O	GLU	C	339	40.832	31.896	46.962	1.00	42.34	O
ATOM	17376	N	GLY	C	340	39.213	31.955	48.402	1.00	35.08	N
ATOM	17378	CA	GLY	C	340	38.963	33.297	47.960	1.00	33.46	C
ATOM	17381	C	GLY	C	340	39.436	34.371	48.950	1.00	36.86	C
ATOM	17382	O	GLY	C	340	39.491	35.574	48.678	1.00	33.13	O
ATOM	17383	N	PHE	C	341	39.800	33.978	50.139	1.00	35.16	N
ATOM	17385	CA	PHE	C	341	40.060	35.003	51.085	1.00	37.28	C
ATOM	17387	CB	PHE	C	341	38.892	34.974	52.025	1.00	38.32	C
ATOM	17390	CG	PHE	C	341	37.579	35.096	51.327	1.00	40.16	C
ATOM	17391	CD1	PHE	C	341	36.751	33.993	51.165	1.00	41.87	C
ATOM	17393	CE1	PHE	C	341	35.543	34.108	50.523	1.00	35.46	C
ATOM	17395	CZ	PHE	C	341	35.160	35.341	50.042	1.00	35.20	C
ATOM	17397	CE2	PHE	C	341	35.976	36.453	50.198	1.00	27.10	C
ATOM	17399	CD2	PHE	C	341	37.160	36.331	50.830	1.00	37.05	C
ATOM	17401	C	PHE	C	341	41.393	34.881	51.842	1.00	37.72	C
ATOM	17402	O	PHE	C	341	42.042	33.895	51.736	1.00	35.29	O
ATOM	17403	N	TYR	C	342	41.793	35.948	52.531	1.00	38.91	N
ATOM	17405	CA	TYR	C	342	42.864	35.934	53.519	1.00	40.66	C
ATOM	17407	CB	TYR	C	342	43.579	37.280	53.593	1.00	40.52	C
ATOM	17410	CG	TYR	C	342	44.730	37.363	54.555	1.00	39.32	C
ATOM	17411	CD1	TYR	C	342	45.634	36.362	54.621	1.00	37.44	C
ATOM	17413	CE1	TYR	C	342	46.694	36.415	55.487	1.00	39.89	C
ATOM	17415	CZ	TYR	C	342	46.880	37.469	56.308	1.00	40.51	C
ATOM	17416	OH	TYR	C	342	48.015	37.396	57.146	1.00	35.08	O
ATOM	17418	CE2	TYR	C	342	45.972	38.527	56.273	1.00	33.09	C
ATOM	17420	CD2	TYR	C	342	44.908	38.466	55.405	1.00	36.55	C
ATOM	17422	C	TYR	C	342	41.948	35.832	54.690	1.00	39.22	C
ATOM	17423	O	TYR	C	342	41.035	36.677	54.718	1.00	33.31	O
ATOM	17424	N	VAL	C	343	42.160	34.836	55.588	1.00	31.59	N
ATOM	17426	CA	VAL	C	343	41.279	34.548	56.731	1.00	32.15	C
ATOM	17428	CB	VAL	C	343	40.744	33.094	56.729	1.00	34.63	C

ATOM	17430	CG1	VAL	C	343	39.678	32.894	57.800	1.00	37.79	C
ATOM	17434	CG2	VAL	C	343	40.158	32.698	55.431	1.00	30.90	C
ATOM	17438	C	VAL	C	343	42.126	34.646	57.971	1.00	34.71	C
ATOM	17439	O	VAL	C	343	43.166	34.057	58.002	1.00	34.88	O
ATOM	17440	N	VAL	C	344	41.668	35.362	58.991	1.00	39.79	N
ATOM	17442	CA	VAL	C	344	42.422	35.621	60.206	1.00	38.00	C
ATOM	17444	CB	VAL	C	344	42.381	37.141	60.498	1.00	42.04	C
ATOM	17446	CG1	VAL	C	344	42.852	37.469	61.904	1.00	48.20	C
ATOM	17450	CG2	VAL	C	344	43.247	37.919	59.538	1.00	39.85	C
ATOM	17454	C	VAL	C	344	41.760	34.888	61.393	1.00	40.20	C
ATOM	17455	O	VAL	C	344	40.616	35.179	61.718	1.00	39.35	O
ATOM	17456	N	PHE	C	345	42.440	33.940	62.045	1.00	38.18	N
ATOM	17458	CA	PHE	C	345	41.849	33.277	63.219	1.00	38.67	C
ATOM	17460	CB	PHE	C	345	42.267	31.811	63.250	1.00	42.75	C
ATOM	17463	CG	PHE	C	345	41.608	30.985	62.172	1.00	44.70	C
ATOM	17464	CD1	PHE	C	345	40.459	30.278	62.431	1.00	46.90	C
ATOM	17466	CE1	PHE	C	345	39.861	29.540	61.441	1.00	45.20	C
ATOM	17468	CZ	PHE	C	345	40.403	29.522	60.202	1.00	37.04	C
ATOM	17470	CE2	PHE	C	345	41.543	30.228	59.941	1.00	41.08	C
ATOM	17472	CD2	PHE	C	345	42.133	30.944	60.899	1.00	40.32	C
ATOM	17474	C	PHE	C	345	42.193	34.007	64.536	1.00	37.35	C
ATOM	17475	O	PHE	C	345	43.045	33.621	65.279	1.00	41.94	O
ATOM	17476	N	ASP	C	346	41.504	35.077	64.834	1.00	39.98	N
ATOM	17478	CA	ASP	C	346	41.863	35.872	65.980	1.00	42.17	C
ATOM	17480	CB	ASP	C	346	41.330	37.273	65.805	1.00	45.99	C
ATOM	17483	CG	ASP	C	346	41.900	38.188	66.796	1.00	49.72	C
ATOM	17484	OD1	ASP	C	346	42.136	37.663	67.899	1.00	52.14	O
ATOM	17485	OD2	ASP	C	346	42.166	39.394	66.570	1.00	48.02	O
ATOM	17486	C	ASP	C	346	41.315	35.302	67.253	1.00	46.76	C
ATOM	17487	O	ASP	C	346	40.267	35.736	67.742	1.00	46.37	O
ATOM	17488	N	ARG	C	347	42.047	34.325	67.780	1.00	48.24	N
ATOM	17490	CA	ARG	C	347	41.697	33.614	68.997	1.00	47.24	C
ATOM	17492	CB	ARG	C	347	42.701	32.505	69.278	1.00	50.28	C
ATOM	17495	CG	ARG	C	347	42.704	31.426	68.259	1.00	51.78	C
ATOM	17498	CD	ARG	C	347	43.965	30.680	68.289	1.00	57.96	C
ATOM	17501	NE	ARG	C	347	44.139	30.045	69.591	1.00	62.86	N
ATOM	17503	CZ	ARG	C	347	43.999	28.748	69.803	1.00	58.59	C
ATOM	17504	NH1	ARG	C	347	43.679	27.946	68.796	1.00	55.77	N
ATOM	17507	NH2	ARG	C	347	44.176	28.254	71.026	1.00	57.83	N
ATOM	17510	C	ARG	C	347	41.666	34.492	70.205	1.00	47.41	C
ATOM	17511	O	ARG	C	347	40.776	34.334	71.022	1.00	48.83	O
ATOM	17512	N	ALA	C	348	42.633	35.393	70.342	1.00	48.64	N
ATOM	17514	CA	ALA	C	348	42.676	36.300	71.498	1.00	52.13	C
ATOM	17516	CB	ALA	C	348	43.786	37.298	71.352	1.00	55.88	C
ATOM	17520	C	ALA	C	348	41.368	37.045	71.671	1.00	55.01	C
ATOM	17521	O	ALA	C	348	40.819	37.132	72.778	1.00	57.03	O
ATOM	17522	N	ARG	C	349	40.864	37.571	70.563	1.00	55.66	N
ATOM	17524	CA	ARG	C	349	39.625	38.335	70.567	1.00	55.25	C
ATOM	17526	CB	ARG	C	349	39.834	39.524	69.656	1.00	56.27	C
ATOM	17529	CG	ARG	C	349	41.089	40.321	70.104	1.00	61.14	C
ATOM	17532	CD	ARG	C	349	41.529	41.415	69.160	1.00	61.41	C
ATOM	17535	NE	ARG	C	349	40.448	42.361	68.951	1.00	67.89	N
ATOM	17537	CZ	ARG	C	349	40.598	43.555	68.413	1.00	67.22	C
ATOM	17538	NH1	ARG	C	349	41.799	43.941	68.019	1.00	57.57	N
ATOM	17541	NH2	ARG	C	349	39.538	44.355	68.266	1.00	68.37	N
ATOM	17544	C	ARG	C	349	38.392	37.516	70.166	1.00	56.07	C
ATOM	17545	O	ARG	C	349	37.361	38.057	69.810	1.00	57.65	O

ATOM	17546	N	LYS	C	350	38.513	36.199	70.229	1.00	57.20	N
ATOM	17548	CA	LYS	C	350	37.426	35.311	69.892	1.00	55.54	C
ATOM	17550	CB	LYS	C	350	36.402	35.347	71.008	1.00	58.01	C
ATOM	17553	CG	LYS	C	350	35.244	34.383	70.795	1.00	63.30	C
ATOM	17556	CD	LYS	C	350	34.646	33.997	72.152	1.00	67.63	C
ATOM	17559	CE	LYS	C	350	34.093	32.572	72.190	1.00	67.21	C
ATOM	17562	NZ	LYS	C	350	33.300	32.324	73.459	1.00	66.54	N
ATOM	17566	C	LYS	C	350	36.758	35.693	68.595	1.00	54.63	C
ATOM	17567	O	LYS	C	350	35.541	35.923	68.575	1.00	58.43	O
ATOM	17568	N	ARG	C	351	37.520	35.768	67.506	1.00	51.33	N
ATOM	17570	CA	ARG	C	351	36.921	36.228	66.232	1.00	51.25	C
ATOM	17572	CB	ARG	C	351	36.660	37.752	66.270	1.00	49.27	C
ATOM	17575	CG	ARG	C	351	37.868	38.645	65.954	1.00	51.56	C
ATOM	17578	CD	ARG	C	351	37.696	40.138	66.363	1.00	54.35	C
ATOM	17581	NE	ARG	C	351	38.944	40.898	66.236	1.00	57.49	N
ATOM	17583	CZ	ARG	C	351	39.061	42.151	65.802	1.00	51.36	C
ATOM	17584	NH1	ARG	C	351	38.005	42.835	65.434	1.00	51.03	N
ATOM	17587	NH2	ARG	C	351	40.259	42.717	65.731	1.00	48.91	N
ATOM	17590	C	ARG	C	351	37.698	35.864	64.967	1.00	47.27	C
ATOM	17591	O	ARG	C	351	38.916	35.715	65.021	1.00	40.70	O
ATOM	17592	N	ILE	C	352	36.964	35.727	63.848	1.00	45.34	N
ATOM	17594	CA	ILE	C	352	37.525	35.396	62.525	1.00	43.43	C
ATOM	17596	CB	ILE	C	352	36.818	34.196	61.969	1.00	45.87	C
ATOM	17598	CG1	ILE	C	352	36.949	33.036	62.953	1.00	46.35	C
ATOM	17601	CD1	ILE	C	352	36.010	31.923	62.680	1.00	50.54	C
ATOM	17605	CG2	ILE	C	352	37.425	33.812	60.638	1.00	46.09	C
ATOM	17609	C	ILE	C	352	37.427	36.552	61.493	1.00	44.39	C
ATOM	17610	O	ILE	C	352	36.374	37.193	61.332	1.00	40.87	O
ATOM	17611	N	GLY	C	353	38.530	36.806	60.787	1.00	43.24	N
ATOM	17613	CA	GLY	C	353	38.623	37.933	59.874	1.00	43.55	C
ATOM	17616	C	GLY	C	353	38.515	37.530	58.428	1.00	45.48	C
ATOM	17617	O	GLY	C	353	39.044	36.500	58.055	1.00	54.82	O
ATOM	17618	N	PHE	C	354	37.849	38.327	57.598	1.00	45.78	N
ATOM	17620	CA	PHE	C	354	37.715	37.991	56.179	1.00	40.77	C
ATOM	17622	CB	PHE	C	354	36.296	37.551	55.869	1.00	39.83	C
ATOM	17625	CG	PHE	C	354	35.966	36.142	56.295	1.00	35.75	C
ATOM	17626	CD1	PHE	C	354	35.660	35.850	57.574	1.00	42.08	C
ATOM	17628	CE1	PHE	C	354	35.352	34.571	57.950	1.00	32.98	C
ATOM	17630	CZ	PHE	C	354	35.355	33.598	57.059	1.00	29.90	C
ATOM	17632	CE2	PHE	C	354	35.652	33.862	55.807	1.00	31.02	C
ATOM	17634	CD2	PHE	C	354	35.952	35.131	55.416	1.00	35.30	C
ATOM	17636	C	PHE	C	354	38.083	39.200	55.295	1.00	41.72	C
ATOM	17637	O	PHE	C	354	37.714	40.315	55.585	1.00	34.33	O
ATOM	17638	N	ALA	C	355	38.824	38.935	54.221	1.00	43.10	N
ATOM	17640	CA	ALA	C	355	39.267	39.937	53.283	1.00	39.49	C
ATOM	17642	CB	ALA	C	355	40.493	40.651	53.791	1.00	46.03	C
ATOM	17646	C	ALA	C	355	39.622	39.226	52.013	1.00	41.04	C
ATOM	17647	O	ALA	C	355	40.040	38.078	52.026	1.00	42.04	O
ATOM	17648	N	VAL	C	356	39.464	39.934	50.910	1.00	41.73	N
ATOM	17650	CA	VAL	C	356	39.681	39.388	49.610	1.00	38.27	C
ATOM	17652	CB	VAL	C	356	39.294	40.438	48.541	1.00	40.02	C
ATOM	17654	CG1	VAL	C	356	39.311	39.862	47.108	1.00	44.27	C
ATOM	17658	CG2	VAL	C	356	37.936	40.971	48.802	1.00	31.45	C
ATOM	17662	C	VAL	C	356	41.156	39.105	49.654	1.00	44.04	C
ATOM	17663	O	VAL	C	356	41.903	39.922	50.189	1.00	46.65	O
ATOM	17664	N	SER	C	357	41.521	37.932	49.121	1.00	49.35	N
ATOM	17666	CA	SER	C	357	42.877	37.379	48.946	1.00	46.26	C

ATOM	17668	CB	SER	C	357	42.764	35.885	48.732	1.00	47.49	C
ATOM	17671	OG	SER	C	357	43.936	35.334	48.149	1.00	57.37	O
ATOM	17673	C	SER	C	357	43.563	37.880	47.719	1.00	48.33	C
ATOM	17674	O	SER	C	357	42.975	37.887	46.664	1.00	46.33	O
ATOM	17675	N	ALA	C	358	44.830	38.271	47.846	1.00	56.29	N
ATOM	17677	CA	ALA	C	358	45.583	38.848	46.722	1.00	56.23	C
ATOM	17679	CB	ALA	C	358	46.834	39.538	47.217	1.00	56.89	C
ATOM	17683	C	ALA	C	358	45.994	37.860	45.668	1.00	54.12	C
ATOM	17684	O	ALA	C	358	46.607	38.256	44.708	1.00	56.22	O
ATOM	17685	N	CYS	C	359	45.696	36.589	45.852	1.00	54.48	N
ATOM	17687	CA	CYS	C	359	46.053	35.583	44.874	1.00	58.48	C
ATOM	17689	CB	CYS	C	359	47.071	34.636	45.479	1.00	60.40	C
ATOM	17692	SG	CYS	C	359	46.287	33.673	46.804	1.00	70.62	S
ATOM	17693	C	CYS	C	359	44.866	34.740	44.441	1.00	55.69	C
ATOM	17694	O	CYS	C	359	45.065	33.670	43.872	1.00	58.26	O
ATOM	17695	N	HIS	C	360	43.646	35.200	44.698	1.00	52.56	N
ATOM	17697	CA	HIS	C	360	42.458	34.444	44.313	1.00	47.84	C
ATOM	17699	CB	HIS	C	360	41.228	34.911	45.062	1.00	44.33	C
ATOM	17702	CG	HIS	C	360	40.456	35.978	44.368	1.00	36.46	C
ATOM	17703	ND1	HIS	C	360	40.527	37.304	44.749	1.00	35.80	N
ATOM	17705	CE1	HIS	C	360	39.725	38.021	43.980	1.00	32.97	C
ATOM	17707	NE2	HIS	C	360	39.146	37.205	43.108	1.00	35.99	N
ATOM	17709	CD2	HIS	C	360	39.583	35.920	43.334	1.00	24.33	C
ATOM	17711	C	HIS	C	360	42.149	34.453	42.837	1.00	48.33	C
ATOM	17712	O	HIS	C	360	41.972	35.472	42.212	1.00	55.09	O
ATOM	17713	N	VAL	C	361	42.049	33.269	42.301	1.00	48.18	N
ATOM	17715	CA	VAL	C	361	41.775	33.081	40.913	1.00	49.01	C
ATOM	17717	CB	VAL	C	361	41.585	31.602	40.711	1.00	46.22	C
ATOM	17719	CG1	VAL	C	361	41.177	31.321	39.315	1.00	51.10	C
ATOM	17723	CG2	VAL	C	361	42.857	30.908	41.025	1.00	47.29	C
ATOM	17727	C	VAL	C	361	40.511	33.766	40.444	1.00	51.23	C
ATOM	17728	O	VAL	C	361	39.424	33.400	40.904	1.00	56.14	O
ATOM	17729	N	HIS	C	362	40.623	34.748	39.552	1.00	52.97	N
ATOM	17731	CA	HIS	C	362	39.418	35.335	38.940	1.00	57.75	C
ATOM	17733	CB	HIS	C	362	38.911	36.603	39.652	1.00	62.76	C
ATOM	17736	CG	HIS	C	362	39.899	37.726	39.721	1.00	66.49	C
ATOM	17737	ND1	HIS	C	362	40.724	37.924	40.807	1.00	69.80	N
ATOM	17739	CE1	HIS	C	362	41.485	38.984	40.598	1.00	70.34	C
ATOM	17741	NE2	HIS	C	362	41.181	39.486	39.417	1.00	71.05	N
ATOM	17743	CD2	HIS	C	362	40.187	38.721	38.849	1.00	71.53	C
ATOM	17745	C	HIS	C	362	39.569	35.585	37.467	1.00	56.16	C
ATOM	17746	O	HIS	C	362	40.553	35.203	36.886	1.00	55.35	O
ATOM	17747	N	ASP	C	363	38.559	36.210	36.869	1.00	62.61	N
ATOM	17749	CA	ASP	C	363	38.561	36.570	35.436	1.00	63.83	C
ATOM	17751	CB	ASP	C	363	37.395	35.908	34.686	1.00	62.33	C
ATOM	17754	CG	ASP	C	363	36.028	36.093	35.405	1.00	67.13	C
ATOM	17755	OD1	ASP	C	363	35.956	36.855	36.408	1.00	60.86	O
ATOM	17756	OD2	ASP	C	363	34.969	35.506	35.031	1.00	63.80	O
ATOM	17757	C	ASP	C	363	38.439	38.084	35.425	1.00	62.69	C
ATOM	17758	O	ASP	C	363	38.327	38.695	36.488	1.00	65.13	O
ATOM	17759	N	GLU	C	364	38.443	38.706	34.259	1.00	62.65	N
ATOM	17761	CA	GLU	C	364	38.410	40.178	34.212	1.00	60.57	C
ATOM	17763	CB	GLU	C	364	38.753	40.605	32.793	1.00	60.33	C
ATOM	17766	CG	GLU	C	364	38.194	41.926	32.333	1.00	61.49	C
ATOM	17769	CD	GLU	C	364	38.714	42.269	30.943	1.00	70.09	C
ATOM	17770	OE1	GLU	C	364	38.632	41.370	30.055	1.00	68.45	O
ATOM	17771	OE2	GLU	C	364	39.216	43.417	30.749	1.00	72.62	O

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ATOM  17772  C   GLU C 364      37.097  40.860  34.703  1.00 55.57           C
ATOM  17773  O   GLU C 364      37.111  41.994  35.171  1.00 55.50           O
ATOM  17774  N   PHE C 365      35.971  40.175  34.628  1.00 50.41           N
ATOM  17776  CA  PHE C 365      34.702  40.825  34.944  1.00 48.24           C
ATOM  17778  CB  PHE C 365      33.671  40.470  33.882  1.00 48.33           C
ATOM  17781  CG  PHE C 365      34.219  40.334  32.501  1.00 48.95           C
ATOM  17782  CD1 PHE C 365      34.692  39.123  32.072  1.00 49.95           C
ATOM  17784  CE1 PHE C 365      35.199  38.950  30.789  1.00 53.08           C
ATOM  17786  CZ  PHE C 365      35.233  39.991  29.912  1.00 55.82           C
ATOM  17788  CE2 PHE C 365      34.750  41.271  30.319  1.00 56.84           C
ATOM  17790  CD2 PHE C 365      34.243  41.424  31.616  1.00 56.84           C
ATOM  17792  C   PHE C 365      34.054  40.497  36.292  1.00 45.78           C
ATOM  17793  O   PHE C 365      32.976  40.993  36.576  1.00 49.51           O
ATOM  17794  N   ARG C 366      34.682  39.663  37.105  1.00 45.57           N
ATOM  17796  CA  ARG C 366      34.121  39.240  38.385  1.00 41.73           C
ATOM  17798  CB  ARG C 366      33.243  38.013  38.194  1.00 38.80           C
ATOM  17801  CG  ARG C 366      31.822  38.352  38.384  1.00 37.22           C
ATOM  17804  CD  ARG C 366      30.802  37.311  38.128  1.00 40.56           C
ATOM  17807  NE  ARG C 366      31.257  36.052  37.537  1.00 48.25           N
ATOM  17809  CZ  ARG C 366      30.432  35.033  37.321  1.00 47.05           C
ATOM  17810  NH1 ARG C 366      29.168  35.161  37.641  1.00 44.28           N
ATOM  17813  NH2 ARG C 366      30.852  33.894  36.787  1.00 53.80           N
ATOM  17816  C   ARG C 366      35.212  38.904  39.367  1.00 42.95           C
ATOM  17817  O   ARG C 366      36.107  38.169  39.041  1.00 47.17           O
ATOM  17818  N   THR C 367      35.105  39.427  40.577  1.00 45.66           N
ATOM  17820  CA  THR C 367      36.140  39.279  41.588  1.00 47.80           C
ATOM  17822  CB  THR C 367      36.868  40.622  41.749  1.00 51.39           C
ATOM  17824  OG1 THR C 367      38.131  40.423  42.363  1.00 57.38           O
ATOM  17826  CG2 THR C 367      36.156  41.538  42.774  1.00 56.23           C
ATOM  17830  C   THR C 367      35.492  38.965  42.905  1.00 46.46           C
ATOM  17831  O   THR C 367      34.522  39.642  43.277  1.00 54.55           O
ATOM  17832  N   ALA C 368      35.993  37.977  43.640  1.00 39.88           N
ATOM  17834  CA  ALA C 368      35.375  37.681  44.909  1.00 32.52           C
ATOM  17836  CB  ALA C 368      36.048  36.619  45.526  1.00 37.31           C
ATOM  17840  C   ALA C 368      35.389  38.935  45.813  1.00 39.83           C
ATOM  17841  O   ALA C 368      36.237  39.822  45.723  1.00 44.69           O
ATOM  17842  N   ALA C 369      34.440  39.005  46.715  1.00 43.60           N
ATOM  17844  CA  ALA C 369      34.275  40.200  47.502  1.00 40.45           C
ATOM  17846  CB  ALA C 369      33.188  40.996  46.899  1.00 43.87           C
ATOM  17850  C   ALA C 369      33.937  39.926  48.946  1.00 37.91           C
ATOM  17851  O   ALA C 369      33.672  38.782  49.352  1.00 37.55           O
ATOM  17852  N   VAL C 370      33.960  41.017  49.694  1.00 36.68           N
ATOM  17854  CA  VAL C 370      33.625  41.058  51.097  1.00 36.40           C
ATOM  17856  CB  VAL C 370      34.810  40.835  51.938  1.00 34.82           C
ATOM  17858  CG1 VAL C 370      34.375  40.751  53.345  1.00 39.75           C
ATOM  17862  CG2 VAL C 370      35.455  39.559  51.558  1.00 40.98           C
ATOM  17866  C   VAL C 370      33.125  42.479  51.368  1.00 38.45           C
ATOM  17867  O   VAL C 370      33.886  43.400  51.320  1.00 26.92           O
ATOM  17868  N   GLU C 371      31.840  42.634  51.674  1.00 44.21           N
ATOM  17870  CA  GLU C 371      31.246  43.943  51.819  1.00 47.61           C
ATOM  17872  CB  GLU C 371      30.441  44.204  50.559  1.00 51.18           C
ATOM  17875  CG  GLU C 371      31.339  44.513  49.383  1.00 54.46           C
ATOM  17878  CD  GLU C 371      30.714  44.152  48.063  1.00 57.83           C
ATOM  17879  OE1 GLU C 371      31.465  44.024  47.072  1.00 64.47           O
ATOM  17880  OE2 GLU C 371      29.479  43.997  48.016  1.00 63.16           O
ATOM  17881  C   GLU C 371      30.337  44.077  53.026  1.00 48.24           C
ATOM  17882  O   GLU C 371      29.893  43.081  53.576  1.00 47.20           O
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ATOM	17883	N	GLY	C	372	30.062	45.311	53.440	1.00	50.29	N
ATOM	17885	CA	GLY	C	372	29.156	45.560	54.560	1.00	50.67	C
ATOM	17888	C	GLY	C	372	29.149	47.025	54.947	1.00	50.50	C
ATOM	17889	O	GLY	C	372	29.884	47.806	54.361	1.00	51.93	O
ATOM	17890	N	PRO	C	373	28.353	47.431	55.934	1.00	52.13	N
ATOM	17891	CA	PRO	C	373	27.466	46.568	56.733	1.00	47.64	C
ATOM	17893	CB	PRO	C	373	27.318	47.351	58.016	1.00	51.45	C
ATOM	17896	CG	PRO	C	373	27.992	48.699	57.790	1.00	49.65	C
ATOM	17899	CD	PRO	C	373	28.278	48.839	56.356	1.00	47.50	C
ATOM	17902	C	PRO	C	373	26.077	46.434	56.223	1.00	46.53	C
ATOM	17903	O	PRO	C	373	25.632	47.293	55.527	1.00	45.34	O
ATOM	17904	N	PHE	C	374	25.398	45.365	56.607	1.00	52.57	N
ATOM	17906	CA	PHE	C	374	24.028	45.097	56.195	1.00	50.90	C
ATOM	17908	CB	PHE	C	374	23.894	43.751	55.484	1.00	49.66	C
ATOM	17911	CG	PHE	C	374	24.437	43.797	54.115	1.00	48.09	C
ATOM	17912	CD1	PHE	C	374	25.718	43.429	53.899	1.00	39.08	C
ATOM	17914	CE1	PHE	C	374	26.255	43.495	52.658	1.00	42.90	C
ATOM	17916	CZ	PHE	C	374	25.507	43.947	51.602	1.00	42.40	C
ATOM	17918	CE2	PHE	C	374	24.192	44.339	51.799	1.00	39.12	C
ATOM	17920	CD2	PHE	C	374	23.660	44.272	53.042	1.00	42.78	C
ATOM	17922	C	PHE	C	374	23.203	45.056	57.387	1.00	52.02	C
ATOM	17923	O	PHE	C	374	23.499	44.353	58.298	1.00	54.34	O
ATOM	17924	N	VAL	C	375	22.141	45.825	57.369	1.00	64.41	N
ATOM	17926	CA	VAL	C	375	21.259	45.867	58.496	1.00	65.17	C
ATOM	17928	CB	VAL	C	375	20.319	47.035	58.465	1.00	65.29	C
ATOM	17930	CG1	VAL	C	375	18.943	46.570	58.832	1.00	62.93	C
ATOM	17934	CG2	VAL	C	375	20.850	48.116	59.416	1.00	68.23	C
ATOM	17938	C	VAL	C	375	20.504	44.604	58.423	1.00	65.98	C
ATOM	17939	O	VAL	C	375	19.770	44.346	57.465	1.00	61.21	O
ATOM	17940	N	THR	C	376	20.735	43.830	59.472	1.00	69.92	N
ATOM	17942	CA	THR	C	376	20.191	42.515	59.661	1.00	72.22	C
ATOM	17944	CB	THR	C	376	21.334	41.602	59.808	1.00	68.57	C
ATOM	17946	OG1	THR	C	376	22.053	41.618	58.582	1.00	71.14	O
ATOM	17948	CG2	THR	C	376	20.874	40.181	59.945	1.00	74.54	C
ATOM	17952	C	THR	C	376	19.394	42.475	60.931	1.00	76.89	C
ATOM	17953	O	THR	C	376	19.568	43.345	61.802	1.00	77.58	O
ATOM	17954	N	LEU	C	377	18.515	41.483	61.041	1.00	78.66	N
ATOM	17956	CA	LEU	C	377	17.779	41.340	62.271	1.00	81.96	C
ATOM	17958	CB	LEU	C	377	16.384	42.007	62.166	1.00	82.78	C
ATOM	17961	CG	LEU	C	377	16.197	43.562	62.077	1.00	80.18	C
ATOM	17963	CD1	LEU	C	377	14.947	43.957	62.853	1.00	78.29	C
ATOM	17967	CD2	LEU	C	377	17.354	44.441	62.577	1.00	78.91	C
ATOM	17971	C	LEU	C	377	17.724	39.892	62.815	1.00	85.19	C
ATOM	17972	O	LEU	C	377	17.679	38.869	62.076	1.00	84.41	O
ATOM	17973	N	ASP	C	378	17.759	39.855	64.146	1.00	85.34	N
ATOM	17975	CA	ASP	C	378	17.597	38.638	64.925	1.00	86.48	C
ATOM	17977	CB	ASP	C	378	16.107	38.328	65.098	1.00	87.44	C
ATOM	17980	CG	ASP	C	378	15.461	39.248	66.154	1.00	89.47	C
ATOM	17981	OD1	ASP	C	378	14.462	39.975	65.855	1.00	84.97	O
ATOM	17982	OD2	ASP	C	378	15.931	39.308	67.324	1.00	86.14	O
ATOM	17983	C	ASP	C	378	18.427	37.522	64.336	1.00	85.13	C
ATOM	17984	O	ASP	C	378	17.942	36.486	63.887	1.00	81.67	O
ATOM	17985	N	MET	C	379	19.722	37.805	64.374	1.00	84.77	N
ATOM	17987	CA	MET	C	379	20.750	36.965	63.819	1.00	82.56	C
ATOM	17989	CB	MET	C	379	22.027	37.805	63.684	1.00	81.97	C
ATOM	17992	CG	MET	C	379	21.955	38.836	62.581	1.00	79.38	C
ATOM	17995	SD	MET	C	379	23.553	39.475	62.065	1.00	83.45	S

ATOM	17996	CE	MET	C	379	23.573	41.080	62.930	1.00	84.33	C
ATOM	18000	C	MET	C	379	21.010	35.728	64.668	1.00	84.75	C
ATOM	18001	O	MET	C	379	21.060	34.618	64.133	1.00	82.43	O
ATOM	18002	N	GLU	C	380	21.163	35.920	65.986	1.00	87.40	N
ATOM	18004	CA	GLU	C	380	21.555	34.840	66.914	1.00	87.60	C
ATOM	18006	CB	GLU	C	380	21.977	35.423	68.276	1.00	89.46	C
ATOM	18009	CG	GLU	C	380	22.952	34.592	69.137	1.00	93.46	C
ATOM	18012	CD	GLU	C	380	23.920	33.680	68.372	1.00	95.12	C
ATOM	18013	OE1	GLU	C	380	25.124	34.033	68.271	1.00	90.03	O
ATOM	18014	OE2	GLU	C	380	23.480	32.596	67.888	1.00	96.29	O
ATOM	18015	C	GLU	C	380	20.459	33.763	67.031	1.00	86.12	C
ATOM	18016	O	GLU	C	380	20.684	32.687	67.584	1.00	86.59	O
ATOM	18017	N	ASP	C	381	19.274	34.075	66.511	1.00	83.49	N
ATOM	18019	CA	ASP	C	381	18.248	33.064	66.258	1.00	81.88	C
ATOM	18021	CB	ASP	C	381	16.884	33.717	66.074	1.00	84.33	C
ATOM	18024	CG	ASP	C	381	16.354	34.306	67.351	1.00	88.13	C
ATOM	18025	OD1	ASP	C	381	17.009	34.123	68.400	1.00	92.81	O
ATOM	18026	OD2	ASP	C	381	15.285	34.957	67.412	1.00	96.45	O
ATOM	18027	C	ASP	C	381	18.542	32.177	65.026	1.00	77.79	C
ATOM	18028	O	ASP	C	381	17.711	31.347	64.663	1.00	73.78	O
ATOM	18029	N	CYS	C	382	19.691	32.376	64.374	1.00	76.40	N
ATOM	18031	CA	CYS	C	382	20.187	31.458	63.331	1.00	74.85	C
ATOM	18033	CB	CYS	C	382	20.891	32.215	62.222	1.00	75.98	C
ATOM	18036	SG	CYS	C	382	19.819	33.500	61.620	1.00	81.03	S
ATOM	18037	C	CYS	C	382	21.192	30.538	63.948	1.00	71.07	C
ATOM	18038	O	CYS	C	382	21.755	29.673	63.284	1.00	71.77	O
ATOM	18039	N	GLY	C	383	21.432	30.753	65.230	1.00	70.20	N
ATOM	18041	CA	GLY	C	383	22.315	29.896	65.987	1.00	71.89	C
ATOM	18044	C	GLY	C	383	21.508	28.693	66.386	1.00	67.41	C
ATOM	18045	O	GLY	C	383	20.307	28.772	66.344	1.00	63.32	O
ATOM	18046	N	TYR	C	384	22.173	27.610	66.777	1.00	70.66	N
ATOM	18048	CA	TYR	C	384	21.524	26.326	67.055	1.00	70.77	C
ATOM	18050	CB	TYR	C	384	22.069	25.337	66.056	1.00	73.27	C
ATOM	18053	CG	TYR	C	384	21.523	23.975	66.237	1.00	78.48	C
ATOM	18054	CD1	TYR	C	384	20.204	23.719	65.946	1.00	81.09	C
ATOM	18056	CE1	TYR	C	384	19.676	22.472	66.103	1.00	85.92	C
ATOM	18058	CZ	TYR	C	384	20.465	21.448	66.560	1.00	86.01	C
ATOM	18059	OH	TYR	C	384	19.876	20.203	66.701	1.00	90.24	O
ATOM	18061	CE2	TYR	C	384	21.805	21.676	66.865	1.00	85.31	C
ATOM	18063	CD2	TYR	C	384	22.322	22.936	66.701	1.00	81.62	C
ATOM	18065	C	TYR	C	384	21.815	25.839	68.471	1.00	69.90	C
ATOM	18066	O	TYR	C	384	22.877	26.160	68.995	1.00	72.05	O
ATOM	18067	N	ASN	C	385	20.917	25.061	69.091	1.00	70.22	N
ATOM	18069	CA	ASN	C	385	21.075	24.714	70.531	1.00	71.13	C
ATOM	18071	CB	ASN	C	385	20.189	25.677	71.312	1.00	69.28	C
ATOM	18074	CG	ASN	C	385	20.760	27.093	71.323	1.00	71.39	C
ATOM	18075	OD1	ASN	C	385	21.959	27.270	71.578	1.00	73.33	O
ATOM	18076	ND2	ASN	C	385	19.922	28.103	71.047	1.00	59.22	N
ATOM	18079	C	ASN	C	385	20.886	23.262	71.086	1.00	73.98	C
ATOM	18080	O	ASN	C	385	19.844	22.617	71.262	1.00	78.23	O
ATOM	18081	OXT	ASN	C	385	21.764	22.479	71.486	1.00	70.20	O
ATOM	18082	N	GLU	D	1	24.811	10.412	15.956	1.00	49.83	N
ATOM	18084	CA	GLU	D	1	24.832	9.932	14.556	1.00	49.27	C
ATOM	18086	CB	GLU	D	1	24.711	11.160	13.647	1.00	52.47	C
ATOM	18089	CG	GLU	D	1	24.175	10.965	12.229	1.00	53.06	C
ATOM	18092	CD	GLU	D	1	23.832	12.282	11.531	1.00	54.58	C
ATOM	18093	OE1	GLU	D	1	23.120	13.161	12.125	1.00	58.12	O

ATOM	18094	OE2	GLU	D	1	24.276	12.444	10.373	1.00	51.77	O
ATOM	18095	C	GLU	D	1	26.172	9.309	14.292	1.00	53.40	C
ATOM	18096	O	GLU	D	1	27.170	9.803	14.821	1.00	62.53	O
ATOM	18099	N	VAL	D	2	26.219	8.207	13.540	1.00	50.49	N
ATOM	18101	CA	VAL	D	2	27.451	7.883	12.839	1.00	47.46	C
ATOM	18103	CB	VAL	D	2	27.878	6.495	13.081	1.00	48.05	C
ATOM	18105	CG1	VAL	D	2	28.636	6.435	14.387	1.00	43.66	C
ATOM	18109	CG2	VAL	D	2	26.682	5.606	13.046	1.00	48.85	C
ATOM	18113	C	VAL	D	2	27.416	8.076	11.318	1.00	46.38	C
ATOM	18114	O	VAL	D	2	26.397	8.224	10.710	1.00	45.59	O
ATOM	18115	N	ASN	D	3	28.589	8.071	10.719	1.00	46.83	N
ATOM	18117	CA	ASN	D	3	28.728	8.117	9.292	1.00	48.82	C
ATOM	18119	CB	ASN	D	3	28.844	9.528	8.743	1.00	47.44	C
ATOM	18122	CG	ASN	D	3	27.547	10.251	8.771	1.00	50.24	C
ATOM	18123	OD1	ASN	D	3	27.033	10.674	7.743	1.00	45.24	O
ATOM	18124	ND2	ASN	D	3	26.998	10.409	9.963	1.00	53.88	N
ATOM	18127	C	ASN	D	3	30.011	7.423	9.016	1.00	45.35	C
ATOM	18128	O	ASN	D	3	30.876	8.042	8.462	1.00	56.01	O
ATOM	18129	O	LOL	D	4	30.649	3.658	7.253	1.00	41.49	O
ATOM	18130	C	LOL	D	4	31.616	4.701	7.302	1.00	44.31	C
ATOM	18131	CA	LOL	D	4	31.464	5.422	8.643	1.00	44.47	C
ATOM	18132	N	LOL	D	4	30.059	5.809	8.714	1.00	40.56	N
ATOM	18133	CB	LOL	D	4	31.620	4.400	9.742	1.00	39.73	C
ATOM	18134	CG	LOL	D	4	31.782	5.153	11.041	1.00	42.24	C
ATOM	18135	CD2	LOL	D	4	32.929	6.168	11.002	1.00	38.09	C
ATOM	18136	CD1	LOL	D	4	32.012	4.153	12.156	1.00	44.46	C
ATOM	18137	O	ALQ	D	5	33.539	6.138	4.922	1.00	46.58	O
ATOM	18138	C	ALQ	D	5	32.895	5.448	4.118	1.00	40.59	C
ATOM	18139	CA	ALQ	D	5	31.531	4.899	4.429	1.00	34.48	C
ATOM	18140	CM	ALQ	D	5	31.262	5.085	5.904	1.00	25.68	C
ATOM	18141	CB	ALQ	D	5	30.525	5.761	3.689	1.00	32.81	C
ATOM	18142	N	ALA	D	6	33.833	4.377	4.106	1.00	47.34	N
ATOM	18144	CA	ALA	D	6	35.183	4.871	3.785	1.00	46.63	C
ATOM	18146	CB	ALA	D	6	35.992	3.752	3.209	1.00	48.42	C
ATOM	18150	C	ALA	D	6	35.139	6.050	2.825	1.00	48.53	C
ATOM	18151	O	ALA	D	6	34.387	6.073	1.850	1.00	41.51	O
ATOM	18154	N	GLU	D	7	35.936	7.053	3.153	1.00	57.71	N
ATOM	18156	CA	GLU	D	7	36.170	8.193	2.282	1.00	61.39	C
ATOM	18158	CB	GLU	D	7	37.103	9.150	2.997	1.00	63.36	C
ATOM	18161	CG	GLU	D	7	36.554	10.567	3.088	1.00	69.77	C
ATOM	18164	CD	GLU	D	7	37.556	11.591	3.638	1.00	72.88	C
ATOM	18165	OE1	GLU	D	7	37.130	12.437	4.470	1.00	71.19	O
ATOM	18166	OE2	GLU	D	7	38.753	11.548	3.245	1.00	71.30	O
ATOM	18167	C	GLU	D	7	36.746	7.878	0.873	1.00	63.19	C
ATOM	18168	O	GLU	D	7	36.460	8.610	-0.067	1.00	59.17	O
ATOM	18169	N	PHE	D	8	37.554	6.833	0.708	1.00	64.51	N
ATOM	18171	CA	PHE	D	8	38.046	6.472	-0.636	1.00	66.42	C
ATOM	18173	CB	PHE	D	8	37.450	5.145	-1.093	1.00	61.61	C
ATOM	18176	CG	PHE	D	8	38.061	4.586	-2.379	1.00	58.86	C
ATOM	18177	CD1	PHE	D	8	37.441	4.769	-3.602	1.00	59.33	C
ATOM	18179	CE1	PHE	D	8	37.986	4.253	-4.767	1.00	58.96	C
ATOM	18181	CZ	PHE	D	8	39.174	3.536	-4.731	1.00	60.39	C
ATOM	18183	CE2	PHE	D	8	39.800	3.345	-3.536	1.00	58.60	C
ATOM	18185	CD2	PHE	D	8	39.239	3.869	-2.355	1.00	59.06	C
ATOM	18187	C	PHE	D	8	37.706	7.526	-1.692	1.00	70.25	C
ATOM	18188	O	PHE	D	8	36.951	7.302	-2.641	1.00	73.78	O
ATOM	18189	OXT	PHE	D	8	38.159	8.667	-1.670	1.00	76.04	O

ATOM	18190	N	GLU	E	1	3.521	56.829	27.990	1.00	51.90	N
ATOM	18192	CA	GLU	E	1	4.813	56.347	27.405	1.00	53.95	C
ATOM	18194	CB	GLU	E	1	4.748	54.908	26.863	1.00	52.89	C
ATOM	18197	CG	GLU	E	1	6.020	54.441	26.144	1.00	54.53	C
ATOM	18200	CD	GLU	E	1	5.940	53.023	25.544	1.00	61.12	C
ATOM	18201	OE1	GLU	E	1	4.802	52.481	25.400	1.00	68.56	O
ATOM	18202	OE2	GLU	E	1	7.009	52.427	25.193	1.00	55.04	O
ATOM	18203	C	GLU	E	1	5.206	57.280	26.290	1.00	56.24	C
ATOM	18204	O	GLU	E	1	4.726	57.179	25.177	1.00	58.77	O
ATOM	18207	N	VAL	E	2	6.069	58.225	26.625	1.00	60.38	N
ATOM	18209	CA	VAL	E	2	6.748	59.058	25.641	1.00	55.03	C
ATOM	18211	CB	VAL	E	2	7.513	60.074	26.359	1.00	53.73	C
ATOM	18213	CG1	VAL	E	2	6.581	60.848	27.263	1.00	55.96	C
ATOM	18217	CG2	VAL	E	2	8.615	59.394	27.171	1.00	56.70	C
ATOM	18221	C	VAL	E	2	7.758	58.285	24.804	1.00	54.06	C
ATOM	18222	O	VAL	E	2	8.268	57.267	25.214	1.00	51.79	O
ATOM	18223	N	ASN	E	3	8.053	58.785	23.618	1.00	51.49	N
ATOM	18225	CA	ASN	E	3	9.062	58.167	22.787	1.00	49.08	C
ATOM	18227	CB	ASN	E	3	8.502	56.972	22.011	1.00	52.23	C
ATOM	18230	CG	ASN	E	3	8.790	55.632	22.678	1.00	58.18	C
ATOM	18231	OD1	ASN	E	3	9.955	55.264	22.882	1.00	65.86	O
ATOM	18232	ND2	ASN	E	3	7.724	54.885	23.009	1.00	59.14	N
ATOM	18235	C	ASN	E	3	9.599	59.235	21.836	1.00	48.29	C
ATOM	18236	O	ASN	E	3	9.547	59.112	20.605	1.00	43.64	O
ATOM	18237	O	LOL	E	4	12.598	62.494	21.688	1.00	44.76	O
ATOM	18238	C	LOL	E	4	11.793	61.498	21.082	1.00	36.75	C
ATOM	18239	CA	LOL	E	4	10.394	61.683	21.640	1.00	39.29	C
ATOM	18240	N	LOL	E	4	10.081	60.567	22.545	1.00	35.78	N
ATOM	18241	CB	LOL	E	4	10.243	62.899	22.530	1.00	30.76	C
ATOM	18242	CG	LOL	E	4	8.730	62.693	22.652	1.00	40.35	C
ATOM	18243	CD2	LOL	E	4	8.185	62.234	21.296	1.00	31.81	C
ATOM	18244	CD1	LOL	E	4	8.003	63.914	23.151	1.00	38.31	C
ATOM	18245	O	ALQ	E	5	12.574	60.630	18.017	1.00	56.62	O
ATOM	18246	C	ALQ	E	5	12.792	61.258	19.046	1.00	45.00	C
ATOM	18247	CA	ALQ	E	5	13.506	60.509	20.107	1.00	39.17	C
ATOM	18248	CM	ALQ	E	5	12.383	59.943	20.954	1.00	33.18	C
ATOM	18249	CB	ALQ	E	5	14.198	59.370	19.382	1.00	38.30	C
ATOM	18250	N	ALA	E	6	13.763	61.587	17.911	1.00	53.06	N
ATOM	18252	CA	ALA	E	6	13.416	62.316	16.681	1.00	48.77	C
ATOM	18254	CB	ALA	E	6	14.238	63.578	16.590	1.00	46.81	C
ATOM	18258	C	ALA	E	6	13.739	61.376	15.550	1.00	56.62	C
ATOM	18259	O	ALA	E	6	14.884	61.001	15.355	1.00	60.60	O
ATOM	18262	N	GLU	E	7	12.718	60.941	14.836	1.00	66.83	N
ATOM	18264	CA	GLU	E	7	12.894	60.209	13.578	1.00	70.79	C
ATOM	18266	CB	GLU	E	7	11.658	60.366	12.670	1.00	71.58	C
ATOM	18269	CG	GLU	E	7	11.195	58.999	12.147	1.00	74.78	C
ATOM	18272	CD	GLU	E	7	9.767	58.949	11.583	1.00	77.65	C
ATOM	18273	OE1	GLU	E	7	9.502	59.494	10.475	1.00	71.21	O
ATOM	18274	OE2	GLU	E	7	8.907	58.325	12.252	1.00	77.08	O
ATOM	18275	C	GLU	E	7	14.184	60.468	12.764	1.00	72.67	C
ATOM	18276	O	GLU	E	7	15.094	59.622	12.765	1.00	77.73	O
ATOM	18277	N	PHE	E	8	14.297	61.598	12.076	1.00	75.16	N
ATOM	18279	CA	PHE	E	8	15.396	61.740	11.113	1.00	80.96	C
ATOM	18281	CB	PHE	E	8	16.737	61.952	11.801	1.00	82.87	C
ATOM	18284	CG	PHE	E	8	17.803	62.573	10.917	1.00	81.73	C
ATOM	18285	CD1	PHE	E	8	18.769	61.793	10.279	1.00	83.54	C
ATOM	18287	CE1	PHE	E	8	19.751	62.381	9.479	1.00	81.99	C

ATOM	18289	CZ	PHE	E	8	19.763	63.746	9.316	1.00	83.35	C
ATOM	18291	CE2	PHE	E	8	18.811	64.520	9.944	1.00	82.55	C
ATOM	18293	CD2	PHE	E	8	17.841	63.934	10.739	1.00	82.70	C
ATOM	18295	C	PHE	E	8	15.507	60.437	10.291	1.00	85.47	C
ATOM	18296	O	PHE	E	8	16.608	59.978	9.946	1.00	83.09	O
ATOM	18297	OXT	PHE	E	8	14.521	59.767	9.937	1.00	89.34	O
ATOM	18298	N	GLU	F	1	40.126	14.124	47.515	1.00	62.65	N
ATOM	18300	CA	GLU	F	1	39.361	14.895	48.535	1.00	57.33	C
ATOM	18302	CB	GLU	F	1	37.879	14.527	48.449	1.00	55.81	C
ATOM	18305	CG	GLU	F	1	36.898	15.591	48.922	1.00	53.48	C
ATOM	18308	CD	GLU	F	1	35.432	15.241	48.626	1.00	57.95	C
ATOM	18309	OE1	GLU	F	1	35.172	14.718	47.492	1.00	57.16	O
ATOM	18310	OE2	GLU	F	1	34.540	15.499	49.515	1.00	46.53	O
ATOM	18311	C	GLU	F	1	39.838	14.584	49.925	1.00	56.46	C
ATOM	18312	O	GLU	F	1	39.954	13.421	50.262	1.00	59.04	O
ATOM	18315	N	VAL	F	2	40.171	15.626	50.694	1.00	52.85	N
ATOM	18317	CA	VAL	F	2	40.258	15.529	52.154	1.00	48.66	C
ATOM	18319	CB	VAL	F	2	41.331	16.368	52.682	1.00	45.45	C
ATOM	18321	CG1	VAL	F	2	42.586	15.583	52.593	1.00	48.71	C
ATOM	18325	CG2	VAL	F	2	41.395	17.658	51.885	1.00	48.21	C
ATOM	18329	C	VAL	F	2	39.011	15.976	52.885	1.00	45.82	C
ATOM	18330	O	VAL	F	2	38.300	16.826	52.430	1.00	52.38	O
ATOM	18331	N	ASN	F	3	38.762	15.399	54.047	1.00	47.13	N
ATOM	18333	CA	ASN	F	3	37.566	15.702	54.814	1.00	48.46	C
ATOM	18335	CB	ASN	F	3	36.425	14.705	54.512	1.00	46.45	C
ATOM	18338	CG	ASN	F	3	35.499	15.178	53.371	1.00	48.95	C
ATOM	18339	OD1	ASN	F	3	34.662	16.042	53.600	1.00	56.94	O
ATOM	18340	ND2	ASN	F	3	35.637	14.599	52.147	1.00	41.31	N
ATOM	18343	C	ASN	F	3	37.938	15.676	56.289	1.00	48.81	C
ATOM	18344	O	ASN	F	3	37.884	14.650	56.945	1.00	46.42	O
ATOM	18345	O	LOL	F	4	39.109	18.145	59.529	1.00	30.33	O
ATOM	18346	C	LOL	F	4	39.139	16.727	59.642	1.00	37.57	C
ATOM	18347	CA	LOL	F	4	39.449	15.978	58.340	1.00	34.22	C
ATOM	18348	N	LOL	F	4	38.607	16.653	57.414	1.00	33.81	N
ATOM	18349	CB	LOL	F	4	40.854	16.178	57.816	1.00	29.74	C
ATOM	18350	CG	LOL	F	4	41.230	14.854	57.136	1.00	42.88	C
ATOM	18351	CD2	LOL	F	4	40.898	13.685	58.067	1.00	44.40	C
ATOM	18352	CD1	LOL	F	4	42.690	14.689	56.716	1.00	33.62	C
ATOM	18353	O	ALQ	F	5	37.076	16.340	61.729	1.00	51.12	O
ATOM	18354	C	ALQ	F	5	37.482	17.448	61.387	1.00	44.19	C
ATOM	18355	CA	ALQ	F	5	37.023	17.885	60.039	1.00	45.38	C
ATOM	18356	CM	ALQ	F	5	37.387	16.833	58.971	1.00	30.19	C
ATOM	18357	CB	ALQ	F	5	35.522	17.952	60.244	1.00	38.38	C
ATOM	18358	N	ALA	F	6	37.907	15.961	62.627	1.00	55.63	N
ATOM	18360	CA	ALA	F	6	37.280	15.766	63.961	1.00	48.80	C
ATOM	18362	CB	ALA	F	6	37.591	16.875	64.882	1.00	43.42	C
ATOM	18366	C	ALA	F	6	35.791	15.554	63.915	1.00	54.73	C
ATOM	18367	O	ALA	F	6	35.009	16.459	64.126	1.00	60.39	O
ATOM	18370	N	GLU	F	7	35.453	14.325	63.591	1.00	61.57	N
ATOM	18372	CA	GLU	F	7	34.181	13.687	63.917	1.00	67.60	C
ATOM	18374	CB	GLU	F	7	34.182	12.237	63.388	1.00	70.70	C
ATOM	18377	CG	GLU	F	7	32.813	11.775	62.910	1.00	73.43	C
ATOM	18380	CD	GLU	F	7	32.354	10.447	63.500	1.00	77.46	C
ATOM	18381	OE1	GLU	F	7	32.607	10.173	64.697	1.00	77.46	O
ATOM	18382	OE2	GLU	F	7	31.714	9.677	62.756	1.00	78.85	O
ATOM	18383	C	GLU	F	7	33.791	13.545	65.424	1.00	65.86	C
ATOM	18384	O	GLU	F	7	33.074	12.629	65.731	1.00	68.96	O

ATOM	18385	N	PHE	F	8	34.287	14.366	66.347	1.00	67.95	N
ATOM	18387	CA	PHE	F	8	33.718	14.541	67.716	1.00	67.25	C
ATOM	18389	CB	PHE	F	8	34.303	15.837	68.301	1.00	68.83	C
ATOM	18392	CG	PHE	F	8	33.612	16.393	69.544	1.00	64.14	C
ATOM	18393	CD1	PHE	F	8	32.493	17.192	69.441	1.00	65.62	C
ATOM	18395	CE1	PHE	F	8	31.873	17.724	70.583	1.00	64.20	C
ATOM	18397	CZ	PHE	F	8	32.376	17.472	71.840	1.00	63.31	C
ATOM	18399	CE2	PHE	F	8	33.496	16.688	71.971	1.00	65.43	C
ATOM	18401	CD2	PHE	F	8	34.123	16.150	70.817	1.00	66.04	C
ATOM	18403	C	PHE	F	8	32.209	14.659	67.761	1.00	71.68	C
ATOM	18404	O	PHE	F	8	31.610	14.612	68.854	1.00	73.64	O
ATOM	18405	OXT	PHE	F	8	31.569	14.808	66.717	1.00	76.55	O
ATOM	18406	O	HOH	W	1	39.700	13.653	43.690	1.00	64.49	O
ATOM	18409	O	HOH	W	2	17.999	-0.835	18.526	1.00	57.08	O
ATOM	18412	O	HOH	W	3	-2.213	39.679	44.264	1.00	47.81	O
ATOM	18415	O	HOH	W	4	44.390	21.700	54.614	1.00	36.23	O
ATOM	18418	O	HOH	W	5	44.036	10.520	13.671	1.00	20.25	O
ATOM	18421	O	HOH	W	6	21.081	11.327	18.984	1.00	79.68	O
ATOM	18424	O	HOH	W	7	12.954	48.886	45.723	1.00	47.92	O
ATOM	18427	O	HOH	W	8	8.570	89.322	9.495	1.00	42.50	O
ATOM	18430	O	HOH	W	9	25.965	-8.446	-10.244	1.00	58.04	O
ATOM	18433	O	HOH	W	10	11.743	63.828	30.252	1.00	60.50	O
ATOM	18436	O	HOH	W	11	-0.897	57.335	42.929	1.00	57.91	O
ATOM	18439	O	HOH	W	12	52.750	29.899	42.854	1.00	71.96	O
ATOM	18442	O	HOH	W	13	31.267	56.125	22.788	1.00	67.37	O
ATOM	18445	O	HOH	W	14	-0.501	17.272	5.350	1.00	49.57	O
ATOM	18448	O	HOH	W	15	19.139	31.098	19.928	1.00	53.73	O
ATOM	18451	O	HOH	W	16	29.653	40.187	36.475	1.00	51.39	O
ATOM	18454	O	HOH	W	17	1.702	54.764	31.203	1.00	59.48	O
ATOM	18457	O	HOH	W	18	17.103	-19.576	2.357	1.00	54.90	O
ATOM	18460	O	HOH	W	19	10.345	16.962	33.276	1.00	66.13	O
ATOM	18463	O	HOH	W	20	9.735	17.583	-5.490	1.00	62.55	O
ATOM	18466	O	HOH	W	21	16.189	57.395	15.723	1.00	60.50	O
ATOM	18469	O	HOH	W	22	17.845	79.168	18.933	1.00	43.39	O
ATOM	18472	O	HOH	W	23	26.061	-0.244	12.926	1.00	35.89	O
ATOM	18475	O	HOH	W	24	21.349	-5.739	-14.919	1.00	60.98	O
ATOM	18478	O	HOH	W	25	-4.354	53.549	53.329	1.00	77.11	O
ATOM	18481	O	HOH	W	26	46.391	31.873	42.449	1.00	46.27	O
ATOM	18484	O	HOH	W	27	5.794	14.925	30.466	1.00	56.03	O
ATOM	18487	O	HOH	W	28	18.066	33.687	53.506	1.00	60.88	O
ATOM	18490	O	HOH	W	29	34.788	61.731	39.462	1.00	47.79	O
ATOM	18493	O	HOH	W	30	21.025	22.947	1.341	1.00	59.51	O
ATOM	18496	O	HOH	W	31	16.949	23.886	38.354	1.00	45.81	O
ATOM	18499	O	HOH	W	32	39.142	5.166	3.509	1.00	66.57	O
ATOM	18502	O	HOH	W	33	60.666	20.142	53.793	1.00	44.92	O
ATOM	18505	O	HOH	W	34	42.265	8.229	-0.588	1.00	60.46	O
ATOM	18508	O	HOH	W	35	32.860	14.034	60.875	1.00	60.98	O
ATOM	18511	O	HOH	W	36	32.941	17.022	57.493	1.00	38.19	O
ATOM	18514	O	HOH	W	37	29.695	61.886	47.641	1.00	59.00	O
ATOM	18517	O	HOH	W	38	33.674	-12.279	-2.746	1.00	45.53	O
ATOM	18520	O	HOH	W	39	41.413	-14.843	19.171	1.00	65.48	O
ATOM	18523	O	HOH	W	40	24.064	6.895	-21.588	1.00	70.17	O
ATOM	18526	O	HOH	W	41	23.715	82.758	18.726	1.00	35.41	O
ATOM	18529	O	HOH	W	42	47.525	-13.020	29.129	1.00	52.35	O
ATOM	18532	O	HOH	W	43	36.969	-15.675	-0.741	1.00	53.72	O
ATOM	18535	O	HOH	W	44	27.524	78.411	40.703	1.00	48.20	O
ATOM	18538	O	HOH	W	45	31.107	72.075	37.162	1.00	47.99	O

ATOM	18541	O	HOH	W	46	21.564	34.567	37.693	1.00	46.25	O
ATOM	18544	O	HOH	W	47	21.067	71.763	21.267	1.00	39.24	O
ATOM	18547	O	HOH	W	48	10.404	9.098	24.542	1.00	57.88	O
ATOM	18550	O	HOH	W	49	5.396	65.013	32.485	1.00	60.14	O
ATOM	18553	O	HOH	W	50	27.493	74.629	18.467	1.00	55.45	O
ATOM	18556	O	HOH	W	51	13.872	41.111	47.061	1.00	42.07	O
ATOM	18559	O	HOH	W	52	9.887	61.022	39.473	1.00	62.04	O
ATOM	18562	O	HOH	W	53	55.509	-10.069	15.668	1.00	47.86	O
ATOM	18565	O	HOH	W	54	37.626	42.674	24.706	1.00	67.33	O
ATOM	18568	O	HOH	W	55	55.291	39.593	51.342	1.00	47.73	O
ATOM	18571	O	HOH	W	56	43.917	17.193	24.624	1.00	60.60	O
ATOM	18574	O	HOH	W	57	41.122	31.365	43.632	1.00	77.01	O
ATOM	18577	O	HOH	W	58	13.079	35.338	39.068	1.00	88.26	O
ATOM	18580	O	HOH	W	59	27.493	-10.186	19.656	1.00	35.50	O
ATOM	18583	O	HOH	W	60	23.506	41.302	45.173	1.00	42.69	O
ATOM	18586	O	HOH	W	61	-0.922	57.734	39.341	1.00	85.08	O
ATOM	18589	O	HOH	W	62	9.888	47.144	47.199	1.00	45.05	O
ATOM	18592	O	HOH	W	63	4.711	19.735	7.209	1.00	60.99	O
ATOM	18595	O	HOH	W	64	20.357	53.470	8.144	1.00	51.38	O
ATOM	18598	O	HOH	W	65	30.784	37.575	33.529	1.00	37.97	O
ATOM	18601	O	HOH	W	66	33.822	-13.870	25.347	1.00	62.92	O
ATOM	18604	O	HOH	W	67	31.877	-4.483	-12.266	1.00	54.62	O
ATOM	18607	O	HOH	W	68	32.094	8.727	34.971	1.00	57.46	O
ATOM	18610	O	HOH	W	69	22.667	29.780	32.323	1.00	51.06	O
ATOM	18613	O	HOH	W	70	62.327	6.382	57.793	1.00	65.33	O
ATOM	18616	O	HOH	W	71	36.357	61.805	15.075	1.00	68.60	O
ATOM	18619	O	HOH	W	72	10.784	50.207	46.403	1.00	57.99	O
ATOM	18622	O	HOH	W	73	34.260	6.846	-14.935	1.00	52.03	O
ATOM	18625	O	HOH	W	74	9.575	-9.503	1.975	1.00	42.15	O
ATOM	18628	O	HOH	W	75	20.501	19.388	34.503	1.00	63.39	O
ATOM	18631	O	HOH	W	76	-5.681	42.903	44.382	1.00	47.81	O
ATOM	18634	O	HOH	W	77	25.415	-23.286	11.860	1.00	36.69	O
ATOM	18637	O	HOH	W	78	7.045	50.529	30.338	1.00	69.50	O
ATOM	18640	O	HOH	W	79	-5.772	89.065	18.733	1.00	61.42	O
ATOM	18643	O	HOH	W	80	14.414	64.947	12.207	1.00	64.73	O
ATOM	18646	O	HOH	W	81	31.802	2.198	-9.686	1.00	55.42	O
ATOM	18649	O	HOH	W	82	10.420	30.167	51.382	1.00	50.99	O
ATOM	18652	O	HOH	W	83	15.150	-3.137	-23.038	1.00	52.37	O
ATOM	18655	O	HOH	W	84	48.107	19.301	35.815	1.00	82.63	O
ATOM	18658	O	HOH	W	85	-1.331	82.678	16.423	1.00	57.12	O
ATOM	18661	O	HOH	W	86	48.215	43.713	47.628	1.00	62.68	O
ATOM	18664	O	HOH	W	87	13.293	76.226	35.713	1.00	60.16	O
ATOM	18667	O	HOH	W	88	42.110	-10.362	7.097	1.00	50.69	O
ATOM	18670	O	HOH	W	89	27.827	-20.605	8.513	1.00	49.19	O
ATOM	18673	O	HOH	W	90	55.096	10.432	53.072	1.00	53.87	O
ATOM	18676	O	HOH	W	91	34.400	69.845	30.780	1.00	51.06	O
ATOM	18679	O	HOH	W	92	25.651	45.557	41.010	1.00	50.02	O
ATOM	18682	O	HOH	W	93	-4.352	46.330	53.290	1.00	47.26	O
ATOM	18685	O	HOH	W	94	21.498	87.119	29.374	1.00	64.19	O
ATOM	18688	O	HOH	W	95	15.571	-1.087	-19.807	1.00	72.71	O
ATOM	18691	O	HOH	W	96	38.100	1.417	58.870	1.00	53.38	O
ATOM	18694	O	HOH	W	97	23.613	3.572	11.202	1.00	47.48	O
ATOM	18697	O	HOH	W	98	10.095	50.879	42.655	1.00	63.46	O
ATOM	18700	O	HOH	W	99	15.664	-12.915	22.110	1.00	56.85	O
ATOM	18703	O	HOH	W	100	16.817	73.724	20.533	1.00	40.32	O
ATOM	18706	O	HOH	W	101	-2.361	88.393	14.727	1.00	69.47	O
ATOM	18709	O	HOH	W	102	46.723	-8.667	16.202	1.00	61.97	O

ATOM	18712	O	HOH W 103	41.497	-4.936	5.247	1.00	35.19	O
ATOM	18715	O	HOH W 104	22.334	-10.122	-11.332	1.00	39.62	O
ATOM	18718	O	HOH W 105	27.866	33.167	19.639	1.00	47.41	O
ATOM	18721	O	HOH W 106	51.713	4.314	11.942	1.00	66.19	O
ATOM	18724	O	HOH W 107	-0.992	-3.672	8.624	1.00	33.89	O
ATOM	18727	O	HOH W 108	62.335	12.316	58.893	1.00	41.09	O
ATOM	18730	O	HOH W 109	33.491	-5.887	-10.390	1.00	41.57	O
ATOM	18733	O	HOH W 110	-5.756	74.126	24.837	1.00	47.70	O
ATOM	18736	O	HOH W 111	46.526	15.070	33.144	1.00	64.45	O
ATOM	18739	O	HOH W 112	18.516	31.491	45.131	1.00	66.88	O
ATOM	18742	O	HOH W 113	7.469	52.148	17.072	1.00	52.60	O
ATOM	18745	O	HOH W 114	9.252	52.803	15.021	1.00	51.30	O
ATOM	18748	O	HOH W 115	36.282	18.066	45.395	1.00	47.63	O
ATOM	18751	O	HOH W 116	17.694	-5.596	0.263	1.00	56.44	O
ATOM	18754	O	HOH W 117	14.604	-3.959	27.588	1.00	52.41	O
ATOM	18757	O	HOH W 118	56.706	25.271	55.385	1.00	50.39	O
ATOM	18760	O	HOH W 119	6.543	-7.728	10.215	1.00	54.60	O
ATOM	18763	O	HOH W 120	21.354	-20.233	10.919	1.00	52.16	O
ATOM	18766	O	HOH W 121	-1.214	7.759	12.883	1.00	46.46	O
ATOM	18769	O	HOH W 122	6.046	10.394	-13.628	1.00	49.67	O
ATOM	18772	O	HOH W 123	49.689	38.586	48.909	1.00	55.60	O
ATOM	18775	O	HOH W 124	45.493	54.453	19.719	1.00	56.14	O
ATOM	18778	O	HOH W 125	53.857	-1.594	17.970	1.00	47.50	O
ATOM	18781	O	HOH W 126	37.535	64.000	25.273	1.00	57.85	O
ATOM	18784	O	HOH W 127	13.976	22.044	60.248	1.00	40.96	O
ATOM	18787	O	HOH W 128	23.599	74.068	17.026	1.00	75.23	O
ATOM	18790	O	HOH W 129	18.700	59.069	48.419	1.00	50.89	O
ATOM	18793	O	HOH W 130	37.126	-0.022	8.701	1.00	45.81	O
ATOM	18796	O	HOH W 131	35.158	-8.435	3.593	1.00	49.91	O
ATOM	18799	O	HOH W 132	7.279	46.170	47.118	1.00	67.83	O
ATOM	18802	O	HOH W 133	38.706	45.973	60.559	1.00	62.46	O
ATOM	18805	O	HOH W 134	3.810	8.884	19.812	1.00	56.91	O
ATOM	18808	O	HOH W 135	30.111	19.847	28.143	1.00	63.17	O
ATOM	18811	O	HOH W 136	21.897	-24.638	9.123	1.00	52.08	O
ATOM	18814	O	HOH W 137	44.787	29.869	37.519	1.00	57.52	O
ATOM	18817	O	HOH W 138	16.457	45.882	14.500	1.00	50.23	O
ATOM	18820	O	HOH W 139	6.610	-9.081	1.907	1.00	66.14	O
ATOM	18823	O	HOH W 140	30.624	17.120	56.530	1.00	43.89	O
ATOM	18826	O	HOH W 141	24.663	54.575	7.459	1.00	75.45	O
ATOM	18829	O	HOH W 142	3.291	53.721	16.115	1.00	52.15	O
ATOM	18832	O	HOH W 143	17.798	44.614	43.412	1.00	35.28	O
ATOM	18835	O	HOH W 144	-3.893	63.767	39.732	1.00	57.61	O
ATOM	18838	O	HOH W 145	26.346	-12.103	-11.462	1.00	51.74	O
ATOM	18841	O	HOH W 146	25.178	37.664	46.309	1.00	42.85	O
ATOM	18844	O	HOH W 147	10.226	70.895	7.418	1.00	23.44	O
ATOM	18847	O	HOH W 148	47.426	-13.956	31.608	1.00	57.62	O
ATOM	18850	O	HOH W 149	42.632	40.326	64.290	1.00	46.68	O
ATOM	18853	O	HOH W 150	47.965	16.027	69.814	1.00	52.99	O
ATOM	18856	O	HOH W 151	35.258	17.505	50.695	1.00	37.18	O
ATOM	18859	O	HOH W 152	42.765	25.171	73.864	1.00	45.61	O
ATOM	18862	O	HOH W 153	17.682	37.118	60.178	1.00	48.19	O
ATOM	18865	O	HOH W 154	4.917	51.651	20.340	1.00	59.26	O
ATOM	18868	O	HOH W 155	18.284	5.065	-22.455	1.00	66.44	O
ATOM	18871	O	HOH W 156	48.174	37.200	72.008	1.00	51.47	O
ATOM	18874	O	HOH W 157	8.994	39.168	22.488	1.00	59.94	O
ATOM	18877	O	HOH W 158	38.685	8.951	71.019	1.00	53.48	O
ATOM	18880	O	HOH W 159	43.966	16.431	65.023	1.00	57.15	O

ATOM	18883	O	HOH W 160	45.628	3.345	77.459	1.00	52.32		O
ATOM	18886	O	HOH W 161	49.305	24.574	45.364	1.00	73.80		O
ATOM	18889	O	HOH W 162	23.302	22.739	1.013	1.00	64.58		O
ATOM	18892	O	HOH W 163	4.901	31.457	31.801	1.00	63.61		O
ATOM	18895	O	HOH W 164	35.668	9.733	38.971	1.00	57.20		O
ATOM	18898	O	HOH W 165	50.588	20.385	73.103	1.00	65.81		O
ATOM	18901	O	HOH W 166	27.437	13.505	15.130	1.00	54.05		O
ATOM	18904	O	HOH W 167	18.140	44.428	69.479	1.00	60.04		O
ATOM	18907	O	HOH W 168	20.428	61.835	21.571	1.00	50.20		O
ATOM	18910	O	HOH W 169	16.346	20.786	61.900	1.00	68.58		O
ATOM	18913	O	HOH W 170	10.022	-16.733	-3.299	1.00	45.71		O
ATOM	18916	O	HOH W 171	52.508	6.294	75.257	1.00	53.77		O
ATOM	18919	O	HOH W 172	58.749	6.101	66.320	1.00	46.84		O
ATOM	18922	O	HOH W 173	28.460	-0.709	0.570	1.00	49.98		O
ATOM	18925	O	HOH W 174	10.291	60.292	8.525	1.00	55.76		O
ATOM	18928	O	HOH W 175	4.095	2.945	15.154	1.00	58.94		O
ATOM	18931	O	HOH W 176	7.244	-13.384	-5.254	1.00	48.74		O
ATOM	18934	O	HOH W 177	32.377	-16.618	-4.059	1.00	44.28		O
ATOM	18937	O	HOH W 178	47.649	0.734	67.335	1.00	49.13		O
ATOM	18940	O	HOH W 179	12.789	47.261	47.980	1.00	63.48		O
ATOM	18943	O	HOH W 180	5.446	-15.480	-4.436	1.00	57.50		O
ATOM	18946	O	HOH W 181	9.087	37.020	24.095	1.00	67.94		O
ATOM	18949	O	HOH W 182	20.864	-8.162	29.795	1.00	49.49		O
ATOM	18952	O	HOH W 183	43.991	-1.427	62.252	1.00	55.02		O

* * *

Having thus described in detail preferred embodiments of the present invention, it is to be understood that the invention defined by the appended claims is not to be limited by particular details set forth in the above description as many apparent variations thereof are possible without departing from the spirit or scope thereof.

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WHAT IS CLAIMED IS:

1. A catalytic domain of BACE or a form of BACE that is suitable for crystallization with the correct disulphide bonding that eliminates the need for refolding and/or an apo-BACE crystal or an apo-BACE crystal that can be soaked to give complexes and/or a crystalline form of BACE having crystals that are grown at or near the physiological pH of the enzyme or between about pH 5.6 and about pH 5.8 and/or a BACE crystal having a space group of C2 and/or a BACE crystal having cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) or 236.63Å ± 3.0Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± 3.0Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± 3.0Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± 3.0Å, b= 107.4Å ± standard deviation (0.2Å) or 107.4Å ± 3.0Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± 3.0Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing; and/or having a space group transition from C2 to $P2_1$ together with an increase in the number of copies of the molecule in the asymmetric unit, while the cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 crystal form, on soaking the apo-BACE crystal with a ligand; and/or a BACE crystal having a resolution better than 3 Å; and/or a BACE crystal having the structure defined by the co-ordinates of Table 5.

2. A BACE crystal having the structure defined by the co-ordinates of Table 5.

3. An apo-BACE crystal grown at or near the physiological pH of the enzyme.

4. An apo-BACE crystal or an apo-BACE crystal that can be soaked to give complexes.

5. A crystalline form of BACE or a functional portion thereof having crystals that are grown at or near the physiological pH of the enzyme.

6. The crystalline form of BACE or functional portion thereof of claim 6 wherein the crystals are grown at a pH between about pH 5.6 and about pH 5.8

7. A crystalline form of BACE or a functional portion thereof having a space group of C2 and cell dimensions of a= 236.63Å or 236.63Å ± standard deviation (0.2Å) 236.63Å ± 3.0Å, b= 105.02Å or 105.02Å ± standard deviation (0.2Å) or 105.02Å ± 3.0Å, and c= 62.59Å or 62.59Å ± standard deviation (0.2Å) or 62.59Å ± 3.0Å and β=101.32° or 101.32° ± standard deviation (0.2°) or between 101° and 108° with the asymmetric unit of the crystal containing three copies of BACE or cell dimensions a= 238.3Å or 238.3Å ± standard deviation (0.2Å) or 238.3Å ± 3.0Å, b= 107.4Å or 107.4Å ± standard deviation (0.2Å) or 107.4Å ± 3.0Å, and c= 60.4Å or 60.4Å ± standard deviation (0.2Å) or 60.4Å ± 3.0Å and β=101.89° or 101.89° ± standard deviation (0.2°) or between 101° and 108° and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having an X-ray diffraction pattern corresponding to or resulting from any or all of the foregoing and/or having a space group transition from C2 to $P2_1$ together with an increase in the number of copies of the molecule in the asymmetric unit, while the cell dimensions and the packing of the $P2_1$ form are closely related to those of the C2 crystal form, on soaking the apo-BACE crystal with a ligand.

8. A crystalline form of BACE or a functional portion thereof that has an active site containing one or more ligands other than the natural substrate or the substrate that occurs naturally or physiologically within the active site.

9. A method for ligand screening or identification comprising exposing the BACE crystals of any one of claims 2-8 to one or more test samples, and determining whether a ligand-BACE complex is formed.

10. The method of claim 9 wherein the BACE protein or functional portion thereof is exposed to the test samples by co-crystallizing the BACE protein or functional portion thereof in the presence of the one or more test samples.

11. The method of claim 9 wherein the BACE of claims 2-8 is soaked in a solution of one or more test samples

12. A computer-assisted method for identifying or designing potential ligands to fit within the catalytic domain of BACE or a functional portion thereof:

comprising using a programmed computer comprising a processor, a data storage system, an input device, and an output device, the steps of: (a) inputting into the programmed computer through said input device data comprising the three-dimensional co-ordinates of a subset of the

atoms in the BACE catalytic domain, optionally with structural information from ligand-BACE complexes, thereby generating a data set; (b) comparing, using said processor, said data set to a computer database of chemical structures stored in said computer data storage system; (c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said data set; (d) constructing, using computer methods, a model of a chemical structure having a portion that is structurally similar to said data set and (e) outputting to said output device the selected chemical structures having a portion similar to said data set; and optionally synthesizing one or more of the selected chemical structures; and further optionally contacting said synthesized selected chemical structure with BACE to ascertain whether said synthesized chemical structure is a ligand that fits within the catalytic domain of BACE and/or inhibits BACE; or,

comprising: providing the structure of BACE as defined by the co-ordinates of Table 5, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the structure of the BACE of Table 5; or,

comprising: providing the co-ordinates of at least two atoms of Table 5 of BACE ("selected co-ordinates"), providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the selected co-ordinates of BACE; or,

comprising: providing the co-ordinates of at least a sub-domain of BACE, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the sub-domain of BACE;

said method optionally further comprising: obtaining or synthesizing the chemical structure or candidate modulator and contacting the chemical structure or candidate modulator with BACE to determine the ability of the chemical structure or candidate to interact with BACE; or obtaining or synthesizing the chemical structure or candidate modulator and forming a complex of BACE and said chemical structure or candidate modulator, and analyzing the complex to determine the ability of said chemical structure or candidate modulator to interact with BACE.

13. A compound having a chemical structure selected using the methods of claims 9-12, said compound being a modulator of BACE

14. A BACE protein or functional portion thereof comprising amino acid sequences of the catalytic domain that crystallize to the crystalline structure of claim 7, or to a structure that mimics that crystalline structure.

15. A BACE protein or functional portion thereof which, when compared to wild-type BACE or BACE of Genbank accession P56817 has one or more mutations or truncations to prevent glycosylation or facilitate crystallization and/or the growth of ordered, well-diffracting crystals.

16. The BACE protein or functional portion thereof of claim 15, which when compared with Genbank accession P56817 has one or more of : a mutation at amino acid ("aa") 153, a mutation at aa 172, a mutation at aa 223, a mutation at aa 354, and one or more truncations.

17. The BACE protein or functional portion thereof of claim 16 wherein each of the mutations is asparagine to glutamine.

18. The BACE protein or functional portion thereof of claim 16 wherein the truncation results in a BACE extending from Thr 22 to Ser 453, with reference to Genbank Accession P56817.

19. The BACE protein or functional portion thereof of claim 16 wherein all of the mutations are present and each is asparagine to glutamine and there is a truncation resulting in a BACE extending from Thr 22 to Ser 453, with reference to Genbank Accession P56817.

20. The BACE protein or functional portion thereof of any one of claims 14-19 further including any one or more of: a tag to facilitate purification; a non-BACE signal sequence to facilitate or increase secretion of the protein into cell culture medium; and a tag to allow differentiation of species arising from incomplete pro-peptide cleavage.

21. The BACE protein or functional portion thereof of claim 20 wherein the tag to facilitate purification is a HIS tag, the non-BACE signal sequence is a baculovirus signal sequence, and the tag to allow differentiation of species is a FLAG tag.

22. The BACE protein or functional portion thereof of claim 21 wherein all of the tag to facilitate purification, the non-BACE signal sequence and the tag to allow differentiation are present.

23. A BACE protein or functional portion thereof containing any one or more of: a tag to facilitate purification; a non-BACE signal sequence to facilitate or increase secretion of the protein into cell culture medium; and a tag to allow differentiation of species arising from incomplete pro-peptide cleavage.

24. The BACE protein or functional portion thereof of claim 23 wherein the tag to facilitate purification is a HIS tag, the non-BACE signal sequence is a baculovirus signal sequence, and the tag to allow differentiation of species is a FLAG tag.

25. The BACE protein or functional portion thereof of claim 24 wherein all of the tag to facilitate purification, the non-BACE signal sequence and the tag to allow differentiation are present.

26. An isolated nucleic acid molecule encoding a BACE protein or functional portion thereof of any of claims 14-25 or a functional portion thereof.

27. The isolated nucleic acid molecule of claim 26 that has a reduced GC content via silent mutations from nucleotide sequences derived from wild-type BACE that would also encode the BACE protein.

28. A vector or cell comprising or expressing the nucleic acid molecule of claim 26.

29. A vector or cell comprising or expressing the nucleic acid molecule of claim 27.

30. The vector or cell of claim 28 which is a viral vector or a bacterial vector or a mammalian cell or a DNA plasmid.

31. The vector or cell of claim 29 which is a viral vector or a bacterial vector or a mammalian cell or a DNA plasmid.

32. The vector or cell of claims 30 or 31 which is a baculovirus vector or an insect cell.

33. The vector or cell of claim 26 further including a nucleic acid molecule encoding an enhancer that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein.

34. The vector or cell of claim 27 further including a nucleic acid molecule encoding an enhancer that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein.

35. The vector or cell of claims 33 or 34 wherein the enhancer is a prohormone convertase.

36. The vector or cell of claim 35 wherein the prohormone convertase is furin.

37. A vector or cell comprising a nucleic acid molecule encoding a BACE protein or functional portion thereof and a nucleic acid molecule encoding an enhancer that enhances in the particular vector or cell system the total amount of BACE produced and/or increases the fraction of processed protein.

38. The vector or cell of claim 37 wherein the enhancer is a prohormone convertase.

39. A kit for producing the vector or cell of claim 37 containing separately packaged nucleic acid molecules comprising (i) a BACE-protein encoding nucleic acid molecule and (ii) a nucleic acid molecule encoding the enhancer.

40. A method for obtaining a BACE protein comprising expressing a nucleic acid molecule according to any of claims 26 or 27 or the nucleic acid molecule of the vector or cell of any of claims 28 to 34 or 37.

41. A method for obtaining a BACE protein comprising expressing the nucleic acid molecule of the vector or cell of claim comprising expressing in a vector or cell the nucleic acid molecules of the kit of claim 39.

42. A method for crystallizing a BACE protein or functional portion thereof comprising dissolving a BACE protein according to any one of claims 14-25 in a suitable solvent and crystallizing the same either in the presence or absence of an inhibitor; wherein said method optionally further includes producing the BACE recombinantly or by expression thereof by a vector, recovering the BACE so produced, and growing crystals from the recovered BACE.

43. The method of claim 42 wherein the inhibitor is OM99-2.

44. A method for determining the crystal structure of a BACE protein or functional portion thereof comprising obtaining crystals of a BACE protein according to any one of claims 14-25 and obtaining an x-ray diffraction pattern thereof.

45. A method for ligand screening and design or identification comprising exposing the BACE crystals of a BACE protein or functional portion thereof to one or more test samples, and determining whether a ligand-BACE complex is formed; wherein the BACE or functional portion thereof has an unoccupied active site and is as claimed in any one of claims 5-8.

46. The method of claim 45 wherein the BACE is exposed to the test samples by either co-crystallizing the BACE or functional portion thereof in the presence of the one or more test samples or soaking the BACE or a functional portion thereof in a solution of one or more test samples.

47. A computer-assisted method for identifying or designing potential ligands to fit within the catalytic domain of BACE or a functional portion thereof:

comprising using a programmed computer comprising a processor, a data storage system, an input device, and an output device, the steps of: (a) inputting into the programmed computer through said input device data comprising the three-dimensional co-ordinates of a subset of the atoms in the BACE catalytic domain or functional portion thereof of any one of claims 5-8, optionally with structural information from ligand-BACE complexes, thereby generating a data set; (b) comparing, using said processor, said data set to a computer database of chemical structures stored in said computer data storage system; (c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said data set; (d) constructing, using computer methods, a model of a chemical structure having a portion that is structurally similar to said data set and (e) outputting to said output device the selected chemical structures having a portion similar to said data set; and optionally synthesizing one or more of the selected chemical structures; and further optionally contacting said synthesized selected chemical structure with BACE to ascertain whether said synthesized chemical structure is a ligand that fits within the catalytic domain of BACE and/or inhibits BACE; or,

comprising: providing the structure of BACE as defined by the co-ordinates of Table 5, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the structure of the BACE of Table 5; or,

comprising: providing the co-ordinates of at least two atoms of Table 5 of BACE ("selected co-ordinates"), providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the selected co-ordinates of BACE; or,

comprising: providing the co-ordinates of at least a sub-domain of BACE, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the sub-domain of BACE;

said method optionally further comprising: obtaining or synthesizing the chemical structure or candidate modulator and contacting the chemical structure or candidate modulator with BACE

to determine the ability of the chemical structure or candidate to interact with BACE; or obtaining or synthesizing the chemical structure or candidate modulator and forming a complex of BACE and said chemical structure or candidate modulator, and analyzing the complex to determine the ability of said chemical structure or candidate modulator to interact with BACE.

48. A ligand identified in any of the methods of claims 45-47.

49. An assay comprising a BACE protein or functional portion thereof of any one of claims 14-25, and means to determine whether a compound is a modulator of BACE.

50. An antibody elicited by a BACE protein or functional portion thereof of any one of claims 14-25.

51. An inhibitor of a BACE protein or functional portion thereof of any one of claims 14-25.

52. A composition comprising the inhibitor of claim 51.

53. A composition comprising the ligand of claim 48.

54. A composition comprising the ligand of claim 13.

55. A composition comprising a product from the assay of claim 49.

56. A method for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof comprising administering an inhibitor of a BACE protein or functional portion thereof as claimed in claim 51.

57. A method for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof comprising administering a ligand of claim 13.

58. A method for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof comprising administering a ligand of claim 48.

59. A BACE which comprises an amino acid sequence of SEQ ID NO: 5 or an amino acid sequence having greater than 98.8% identity with SEQ ID NO:5.

60. The BACE of claim 59 having the amino acid sequence of SEQ ID NO:5.

61. A nucleic acid molecule encoding the BACE of claim 59 or 60.

62. An isolated nucleic acid molecule comprising a sequence of SEQ ID NO: 4 or 10 or a sequence having greater than 95.6% identity with SEQ ID NO: 4 or 10.

63. The isolated nucleic acid molecule of claim 62 having the sequence of SEQ ID NO:4.

64. The isolated nucleic acid molecule of claim 63 having the sequence of SEQ ID NO:10.

65. A vector or cell comprising the isolated nucleic acid molecule of any one of claims 62-64.

66. The vector or cell of claim 65 which is a baculovirus vector or an insect cell.

67. An inhibitor of the BACE of any one of claims 59 or 60.

68. An antibody elicited by the BACE of any one of claims 59 or 60.

69. A method for ligand screening and design or identification comprising exposing the BACE crystals of a BACE protein or functional portion thereof to one or more test samples, and determining whether a ligand-BACE complex is formed; wherein the BACE or functional portion thereof has an unoccupied active site and is as claimed in any one of claims 59 or 60.

70. The method of claim 69 wherein the BACE is exposed to the test samples by either co-crystallizing the BACE or functional portion thereof in the presence of the one or more test samples or soaking the BACE or a functional portion thereof in a solution of one or more test samples.

71. A computer-assisted method for identifying or designing potential ligands to fit within the catalytic domain of BACE or a functional portion thereof:

comprising using a programmed computer comprising a processor, a data storage system, an input device, and an output device, the steps of: (a) inputting into the programmed computer through said input device data comprising the three-dimensional co-ordinates of a subset of the atoms in the BACE catalytic domain or functional portion thereof of any one of claims 59 or 60, optionally with structural information from ligand-BACE complexes, thereby generating a data set; (b) comparing, using said processor, said data set to a computer database of chemical structures stored in said computer data storage system; (c) selecting from said database, using computer methods, chemical structures having a portion that is structurally similar to said data set; (d) constructing, using computer methods, a model of a chemical structure having a portion that is structurally similar to said data set and (e) outputting to said output device the selected chemical structures having a portion similar to said data set; and optionally synthesizing one or more of the selected chemical structures; and further optionally contacting said synthesized

selected chemical structure with BACE to ascertain whether said synthesized chemical structure is a ligand that fits within the catalytic domain of BACE and/or inhibits BACE; or,

comprising: providing the structure of BACE as defined by the co-ordinates of Table 5, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the structure of the BACE of Table 5; or,

comprising: providing the co-ordinates of at least two atoms of Table 5 of BACE ("selected co-ordinates"), providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the selected co-ordinates of BACE; or,

comprising: providing the co-ordinates of at least a sub-domain of BACE, providing the structure of a candidate modulator molecule, and fitting the structure of the candidate to the sub-domain of BACE;

said method optionally further comprising: obtaining or synthesizing the chemical structure or candidate modulator and contacting the chemical structure or candidate modulator with BACE to determine the ability of the chemical structure or candidate to interact with BACE; or obtaining or synthesizing the chemical structure or candidate modulator and forming a complex of BACE and said chemical structure or candidate modulator, and analyzing the complex to determine the ability of said chemical structure or candidate modulator to interact with BACE.

72. A ligand identified in any of the methods of claims 68-71.

73. An assay comprising a BACE protein or functional portion thereof of any one of claims 58 or 59, and means to determine whether a compound is a modulator of BACE.

74. A composition comprising the inhibitor of claim 67.

75. A composition comprising the ligand of claim 72.

76. A composition comprising a product from the assay of claim 73.

77. A method for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof comprising administering an inhibitor of a BACE protein or functional portion thereof as claimed in claim 67.

78. A method for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof comprising administering a ligand of claim 72.

79. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 51 for preparing a composition or medicament for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof.

80. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 13 for preparing a composition or medicament for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof.

81. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 48 for preparing a composition or medicament for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof.

82. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 51 for use in therapy.

83. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 67 for preparing a composition or medicament for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof.

84. Use of an inhibitor of a BACE protein or functional portion thereof as claimed in claim 72 for preparing a composition or medicament for inhibiting BACE or the production of Aβ or fragments thereof or treating AD in an individual in need thereof.

85. A computer system for generating structures or performing rational compound or drug design for BACE or complexes of BACE with a potential modulator, the system containing either: atomic co-ordinate data according to Table 5, said data defining the three-dimensional structure of BACE or at least one sub-domain thereof, or structure factor data for BACE, said structure factor data being derivable from the atomic co-ordinate data of Table 5.

86. A computer readable media with either: atomic co-ordinate data according to Table 5, said data defining the three-dimensional structure of BACE or at least one sub-domain thereof, or structure factor data for BACE, said structure factor data being derivable from the atomic co-ordinate data of Table 5.

87. A method of doing business comprising providing to a user the computer system of claim 85 or the computer readable media of claim 83 or the three-dimensional structure of BACE or at least one sub-domain thereof, or structure factor data for BACE, said structure factor data being derivable from the atomic co-ordinate data of Table 5.

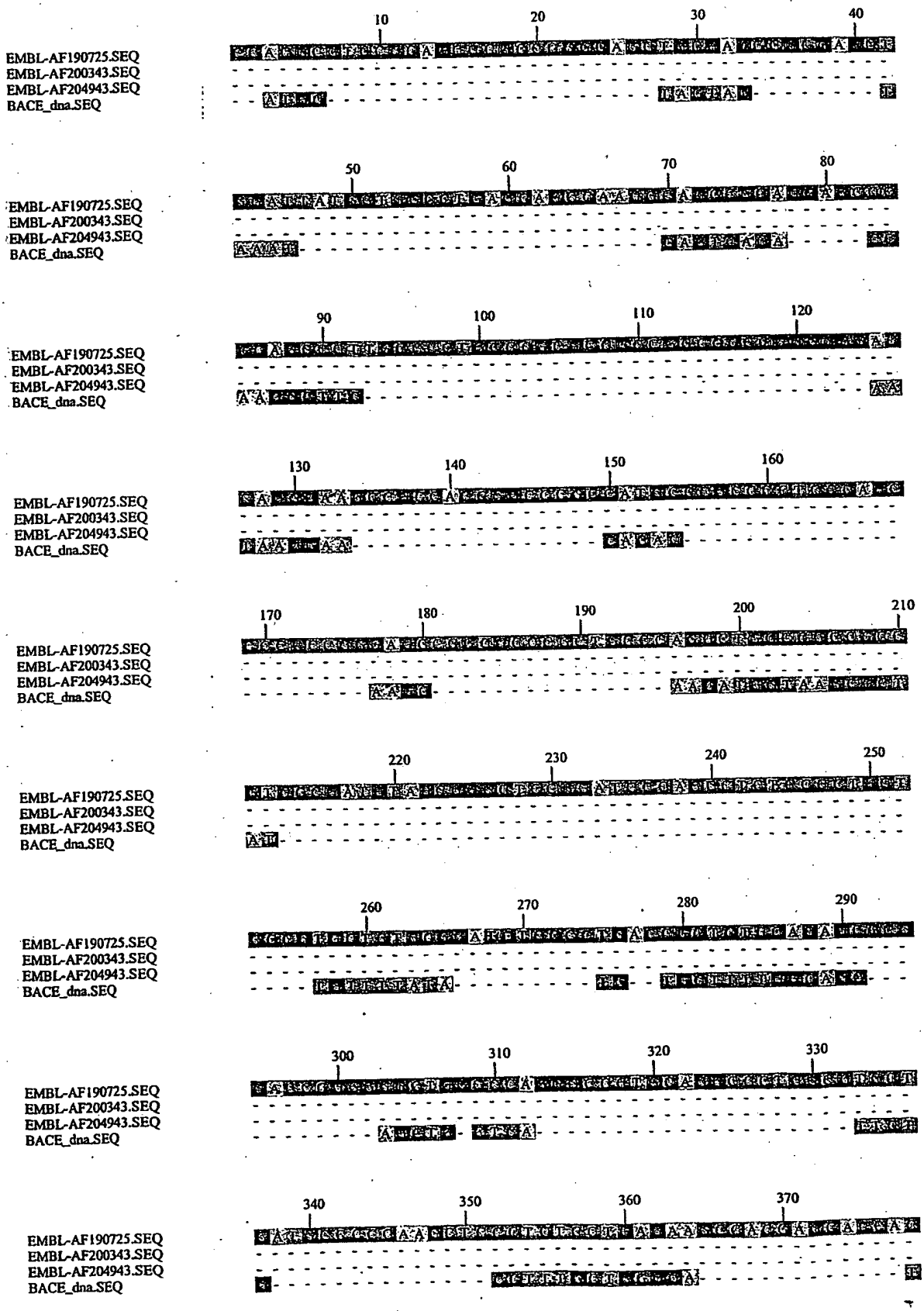
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FIG. 1A.

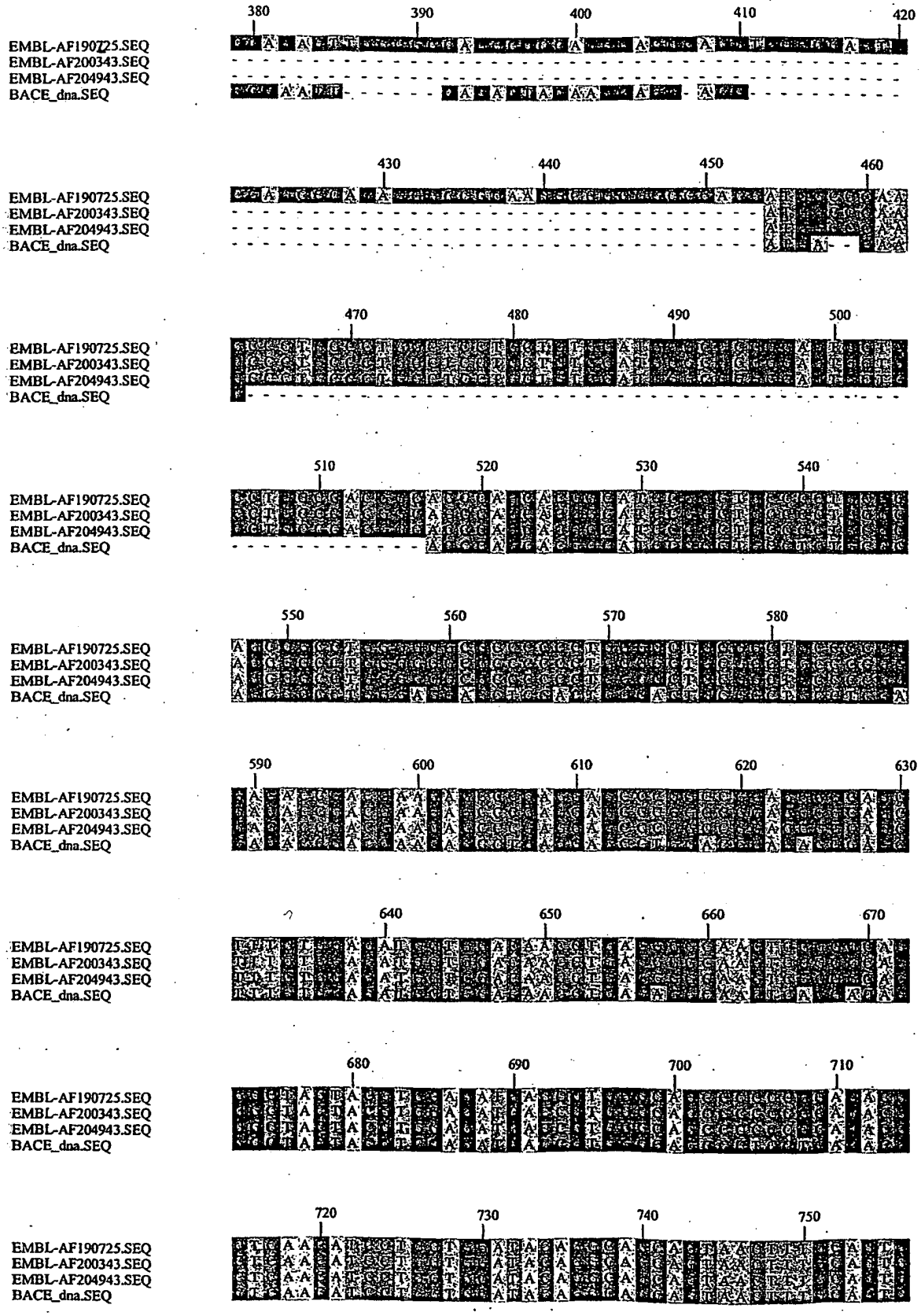

FIG. 1A. (CONTINUED 1)

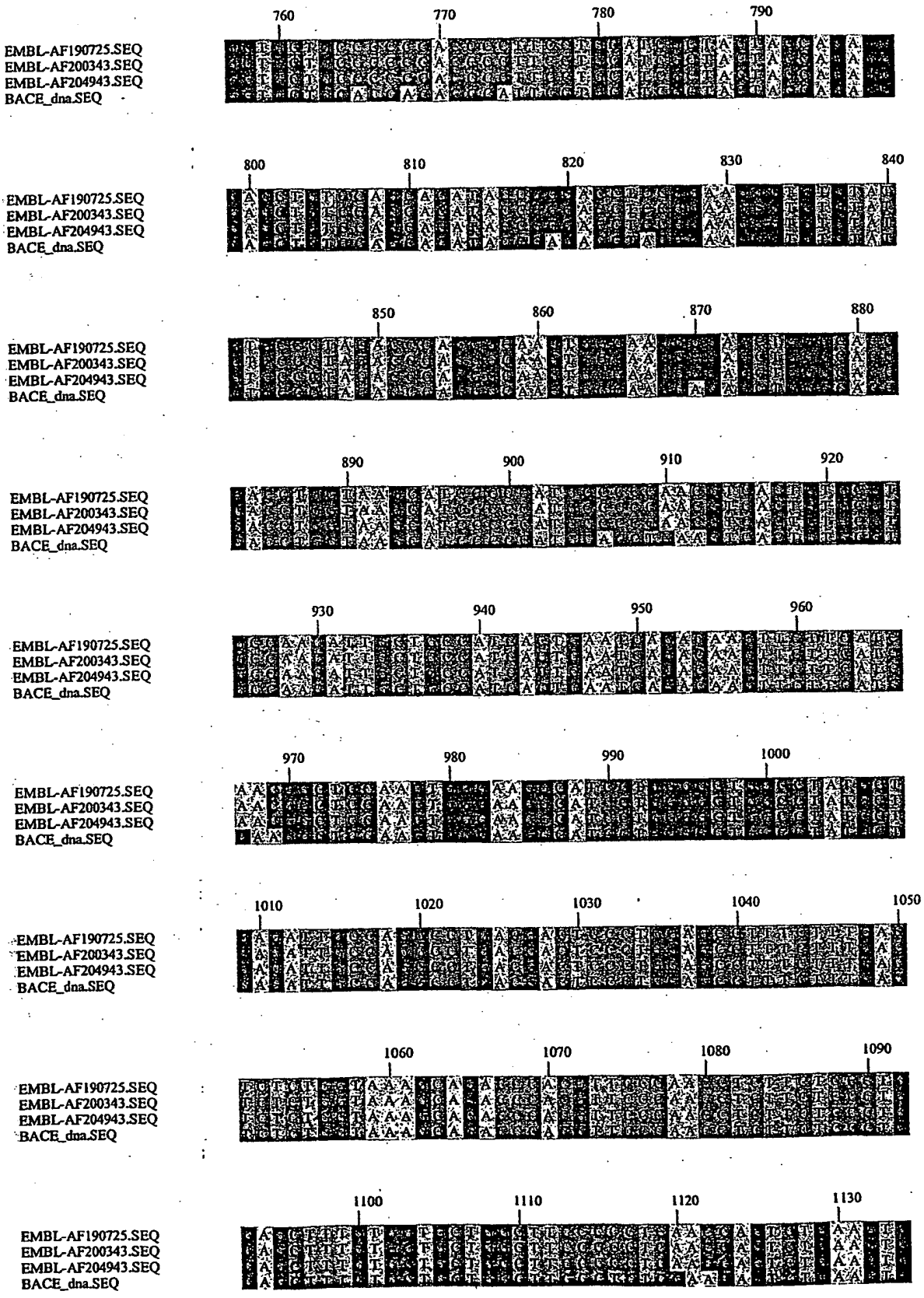

FIG. 1A. (CONTINUED 2).

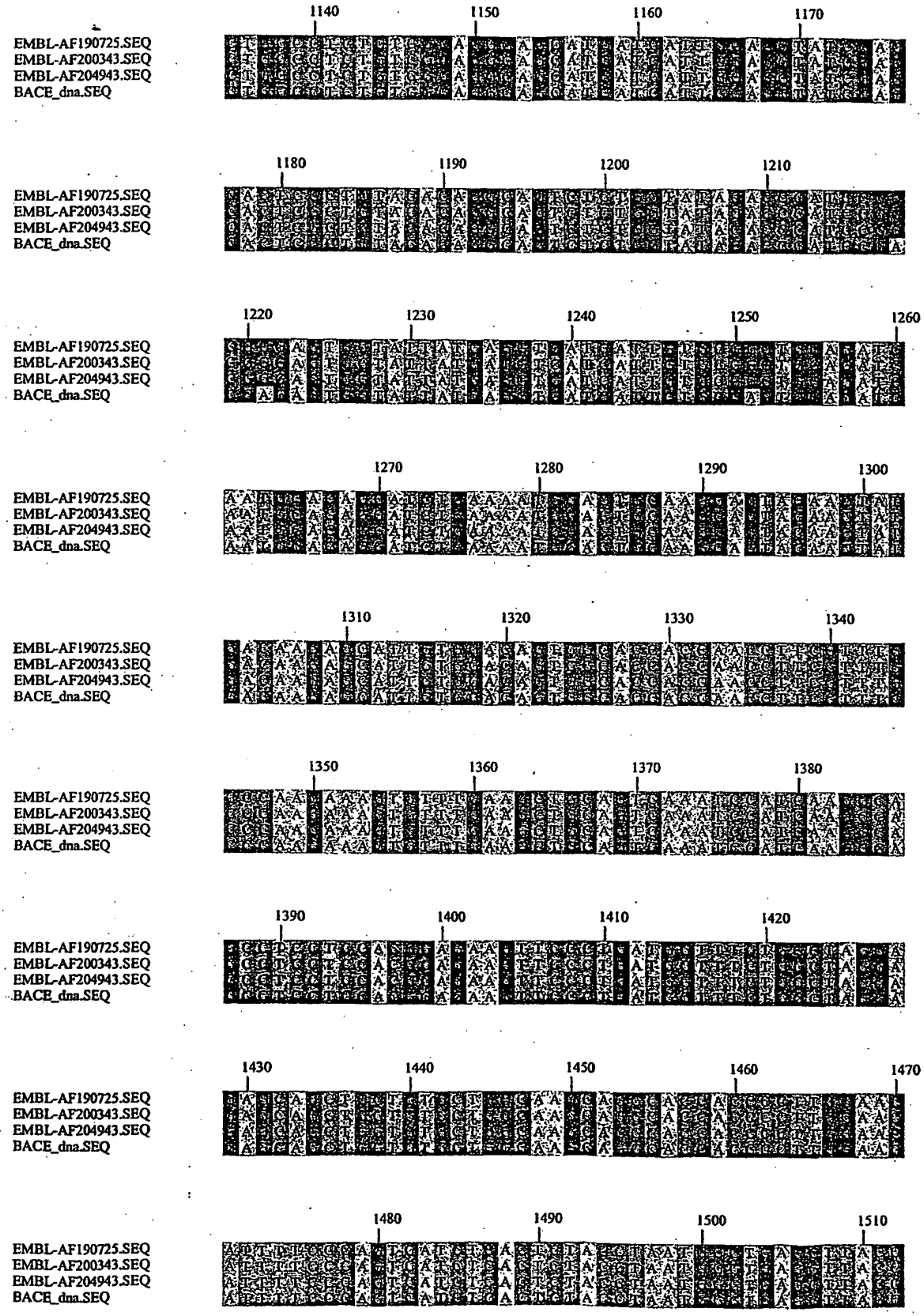

FIG 1A. (CONTINUED 3).

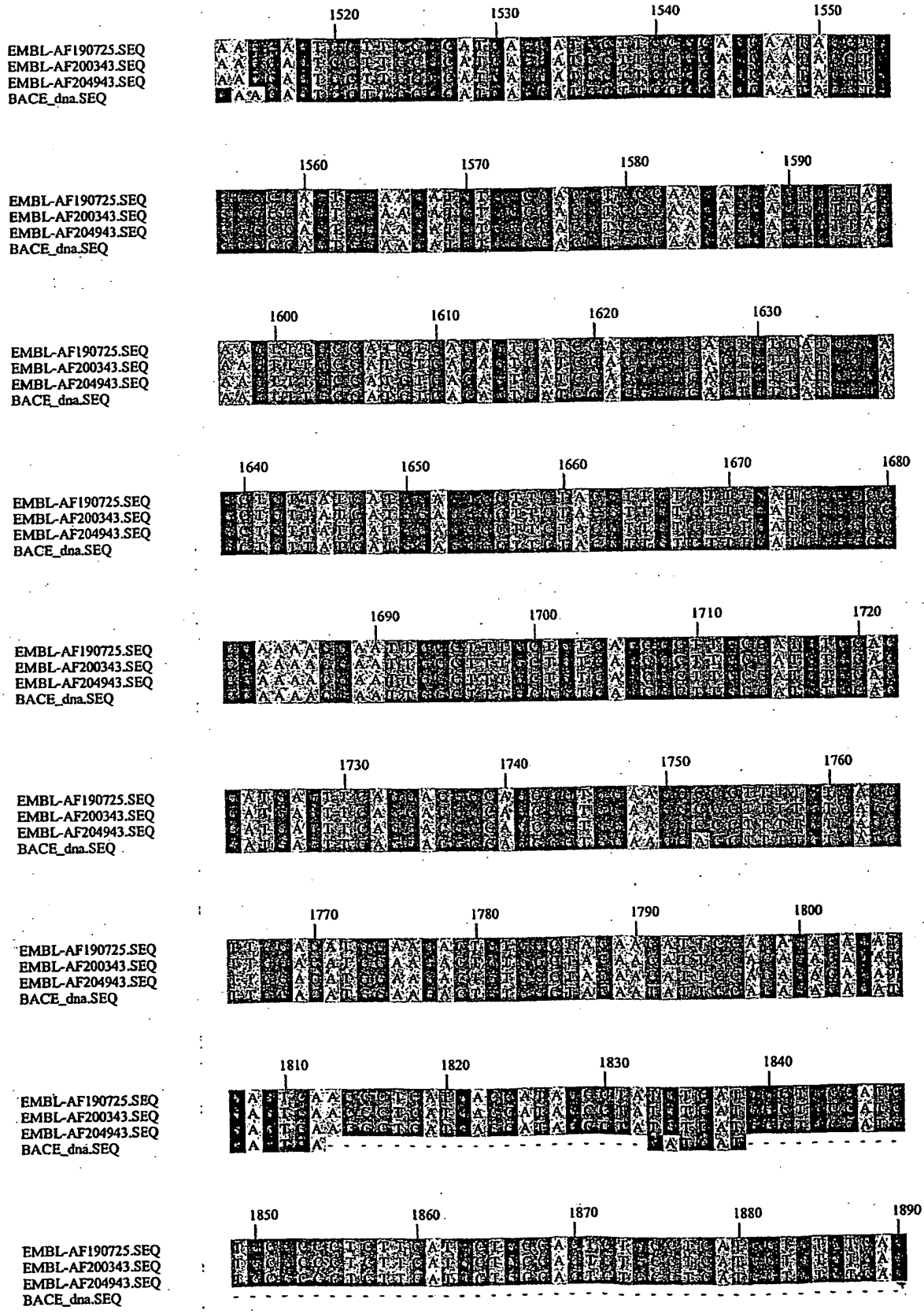

FIG. 1A. (CONTINUED 4).

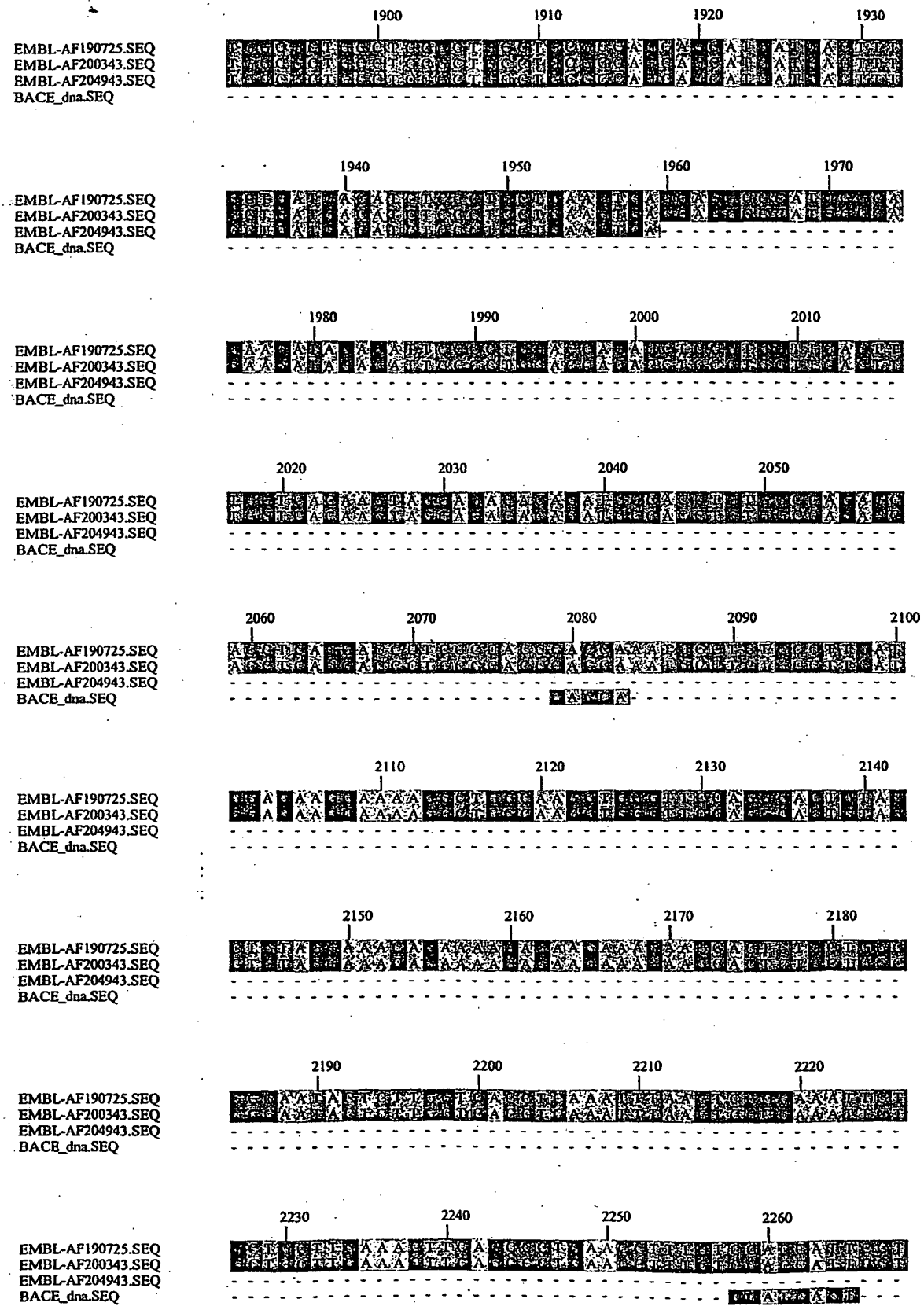

FIG. 1A. (CONTINUED 5).

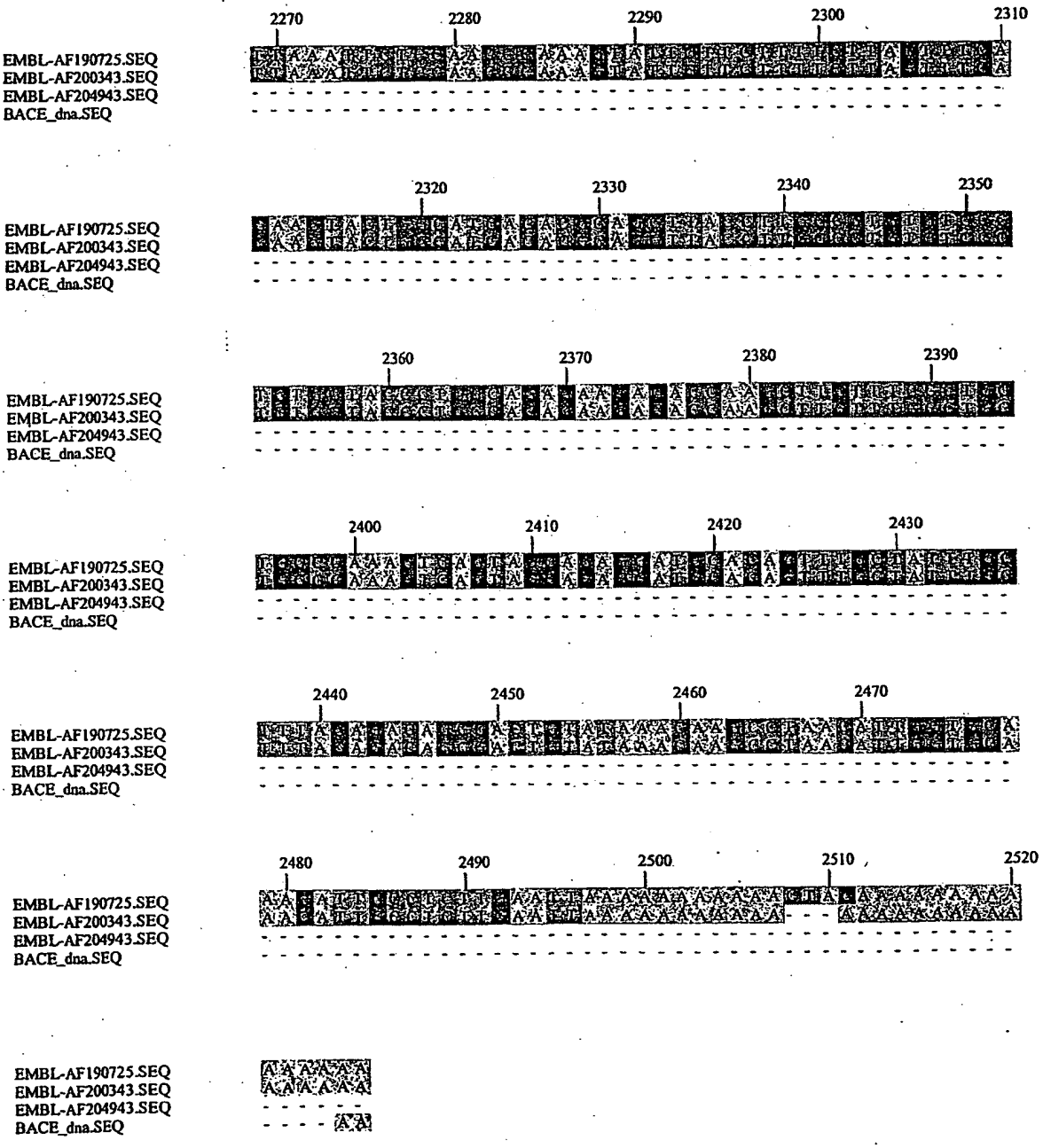

FIG. 1A. (CONTINUED 6).

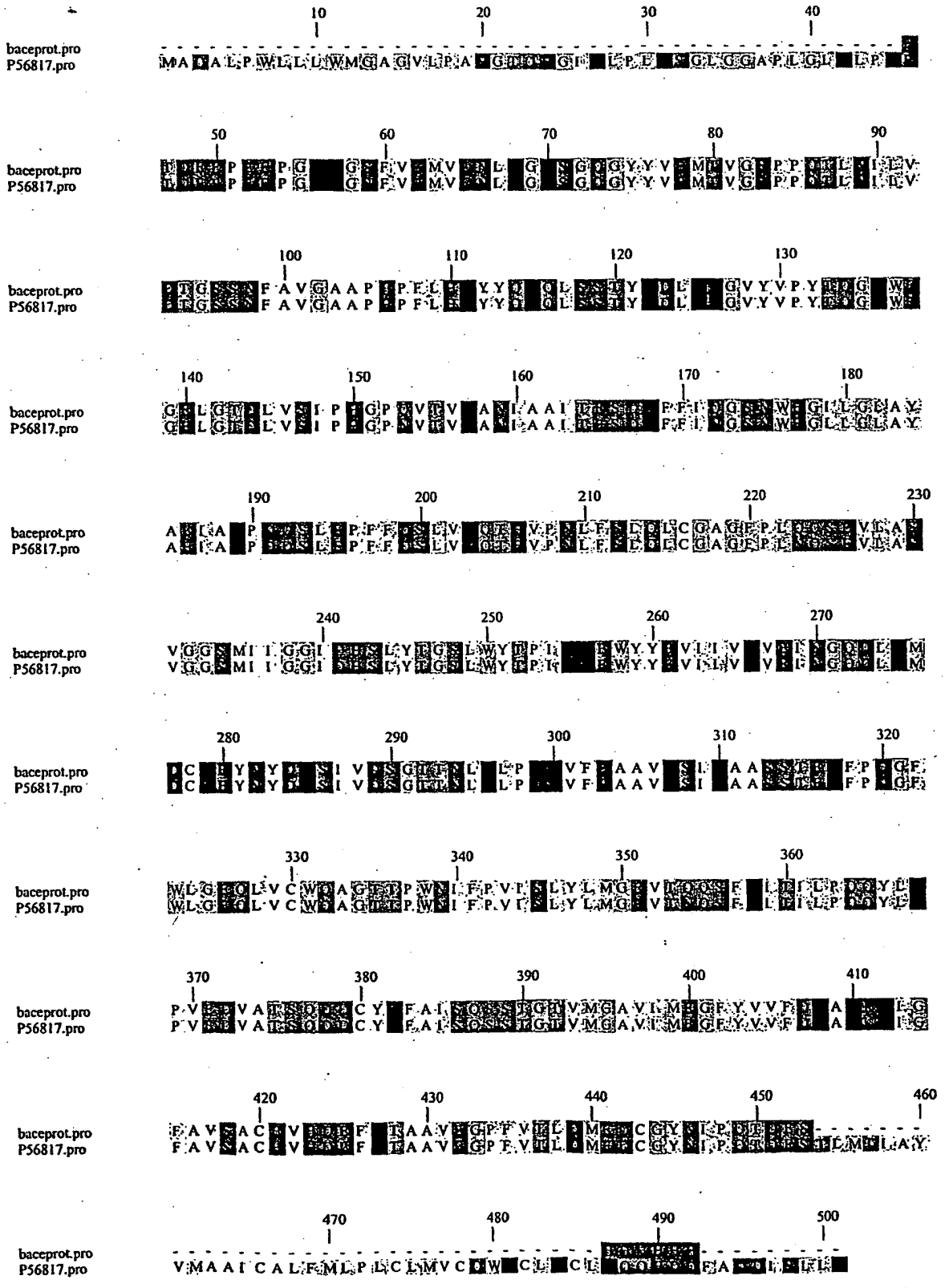

FIG. 1B.

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SDKFFIQGSN WEGILGLAYA EIARPDDSLE PFFDSLVKQT HVPNLFSLQL CGAGFPLQQS     180
EVLASVGGSM IIGGIDHSLY TGSLWYTPIR REWYYEVIIV RVEINGQDLK MDCKEYNYDK     240
SIVDSGTTNL RLPKKVFEAA VKSIKAASST EKFPDGFWLG EQLVCWQAGT TPWNIFPVIS     300
LYLMGEVTQQ SFRITILPQQ YLRPVEDVAT SQDDCYKFAI SQSSTGTVMG AVIMEGFYVV     360
FDRARKRIGF AVSACHVHDE FRTAAVEGPF VTLDMEDCGY NIPQTDESHH HHHH           414
```

FIG. 2A.

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FIG. 2B.

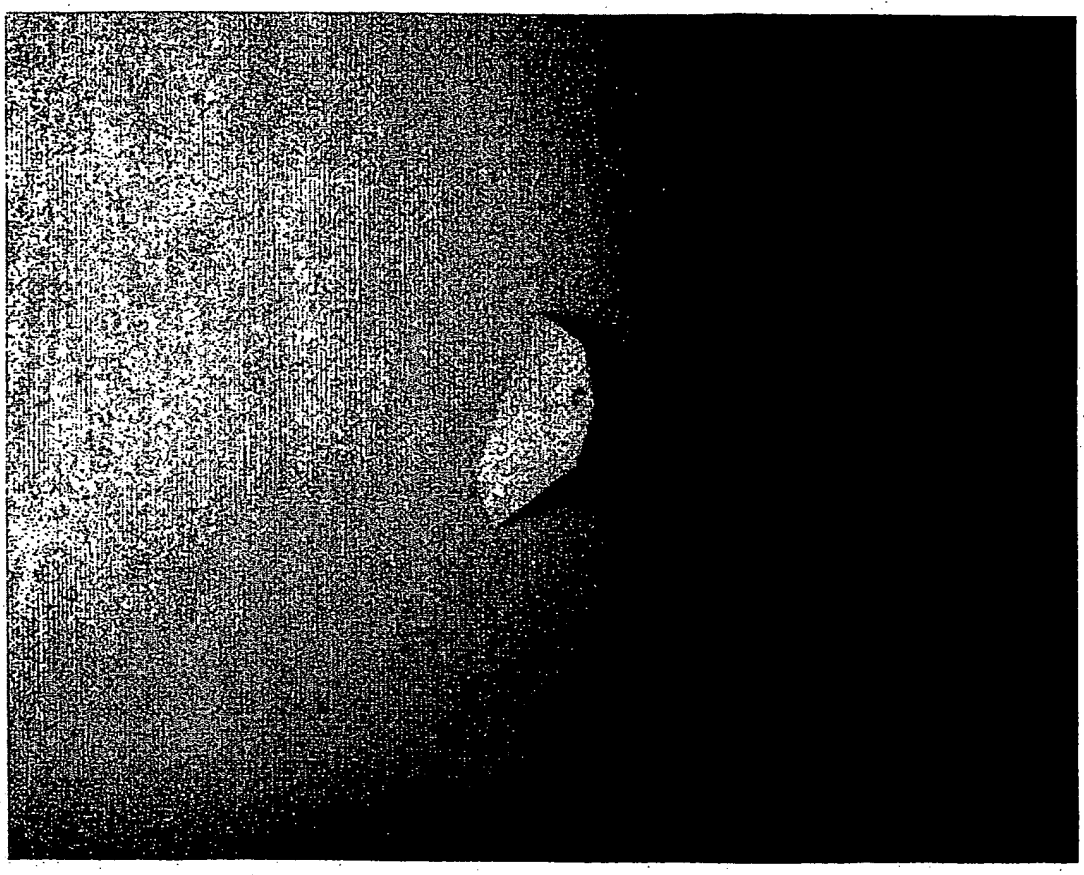


FIG. 3A.

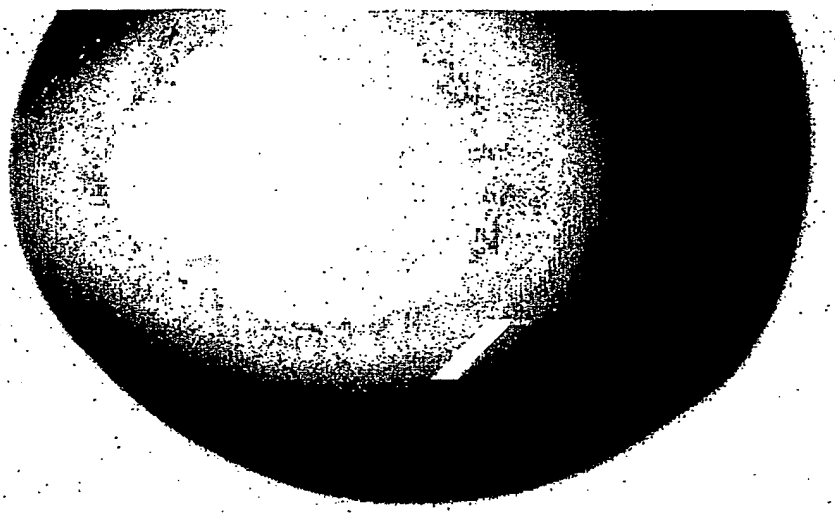


FIG. 3B.

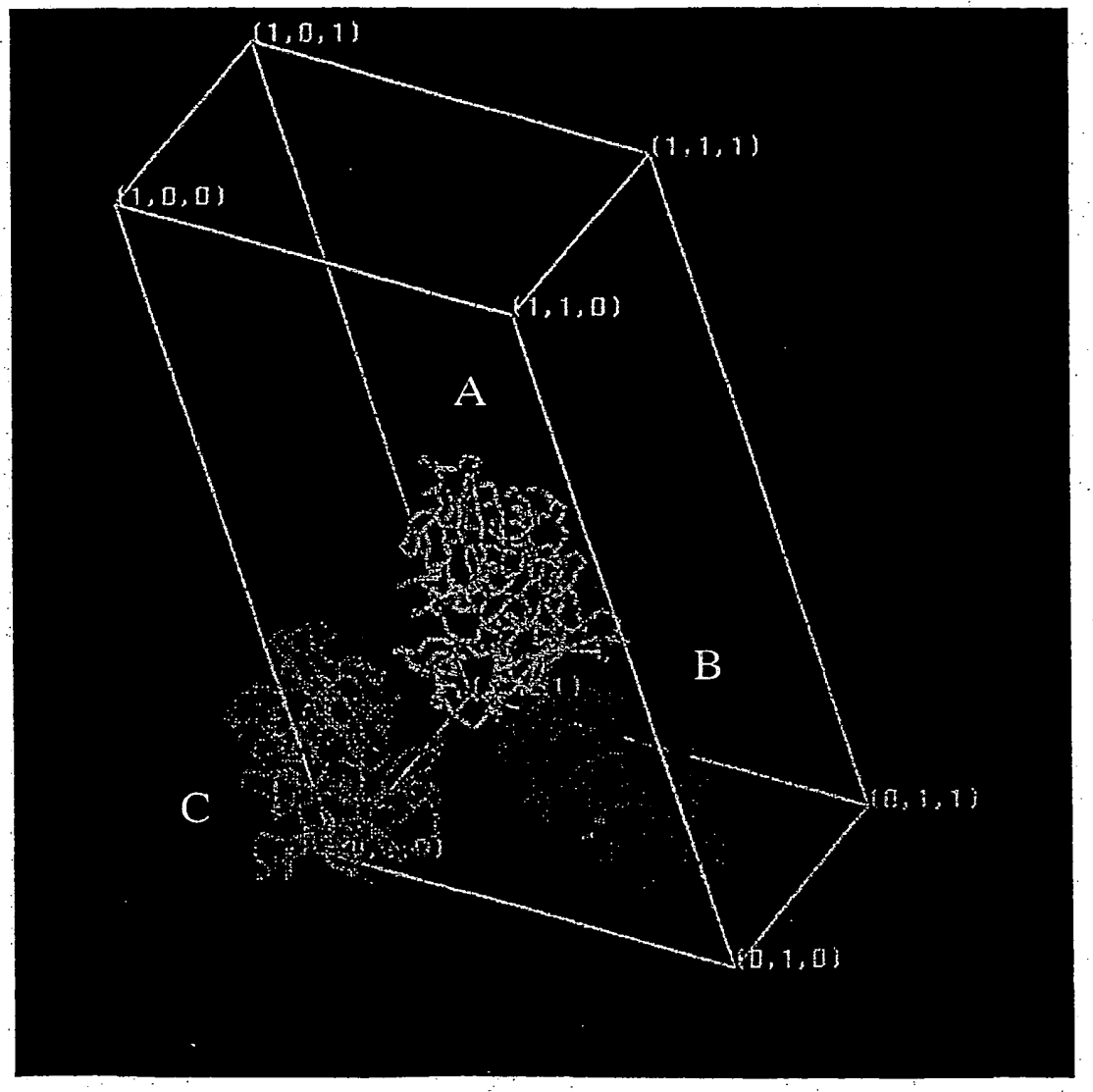


FIG. 4A.

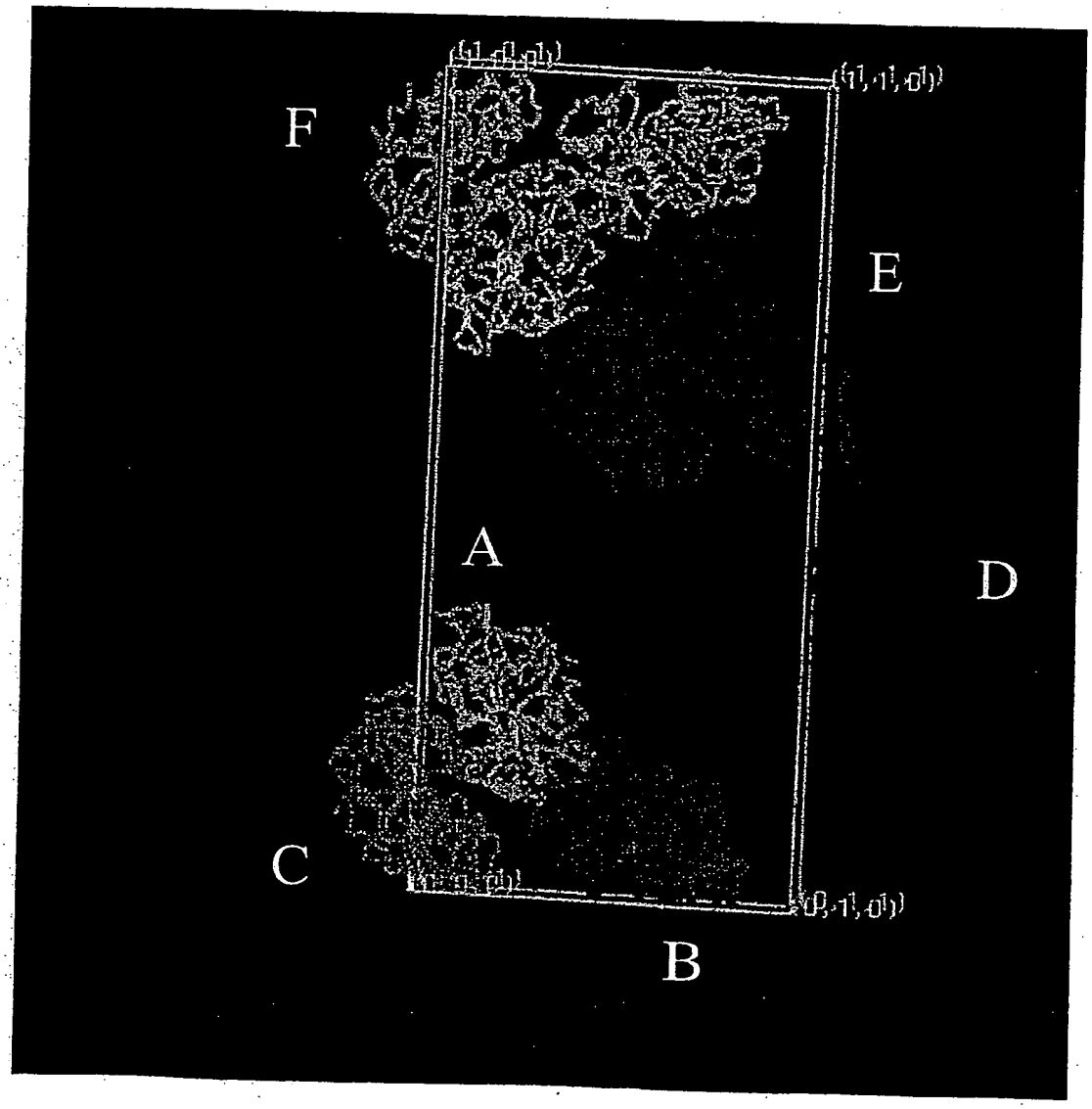
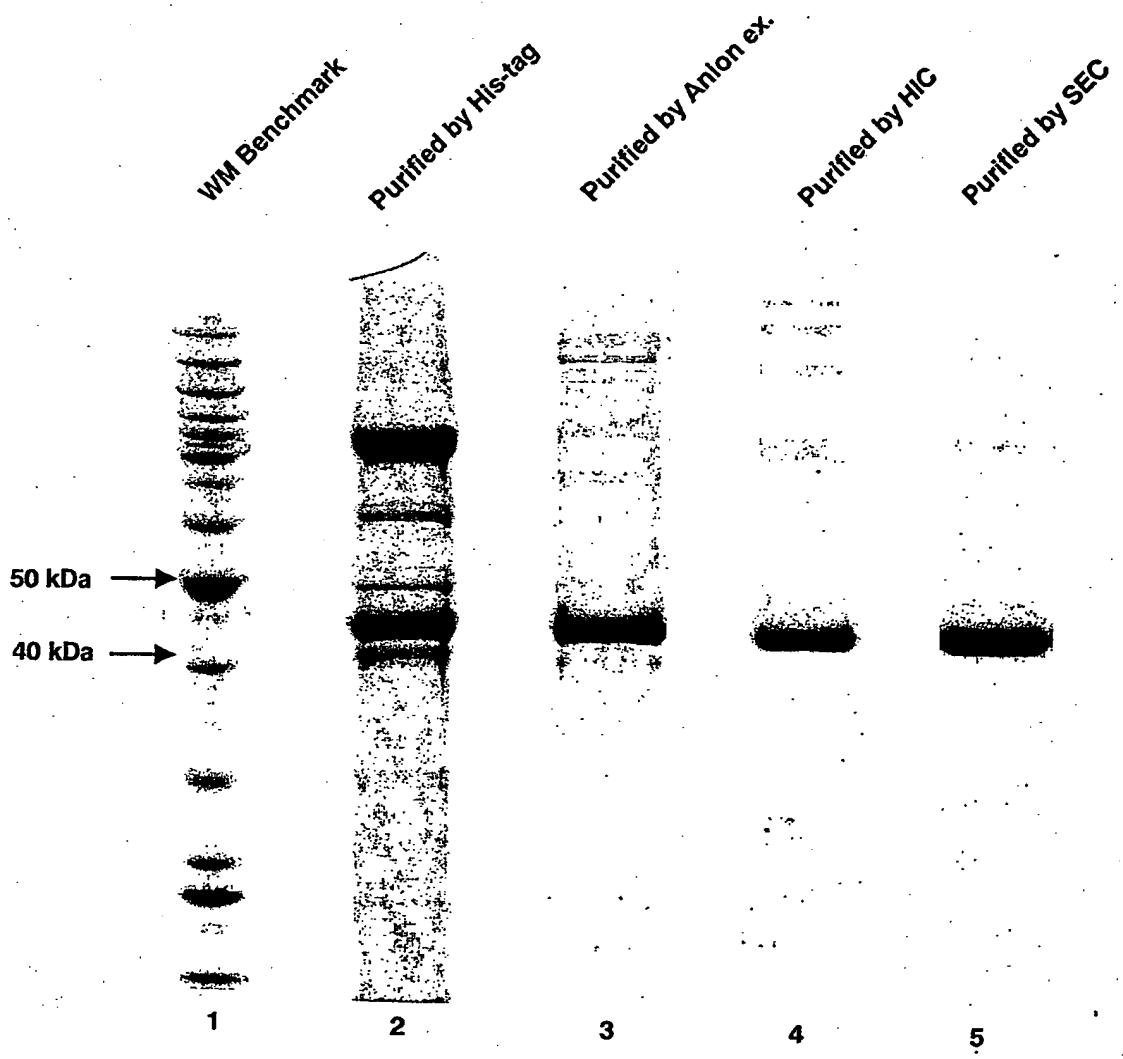


FIG. 4B.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Purified by Anion ex.
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40 kDa
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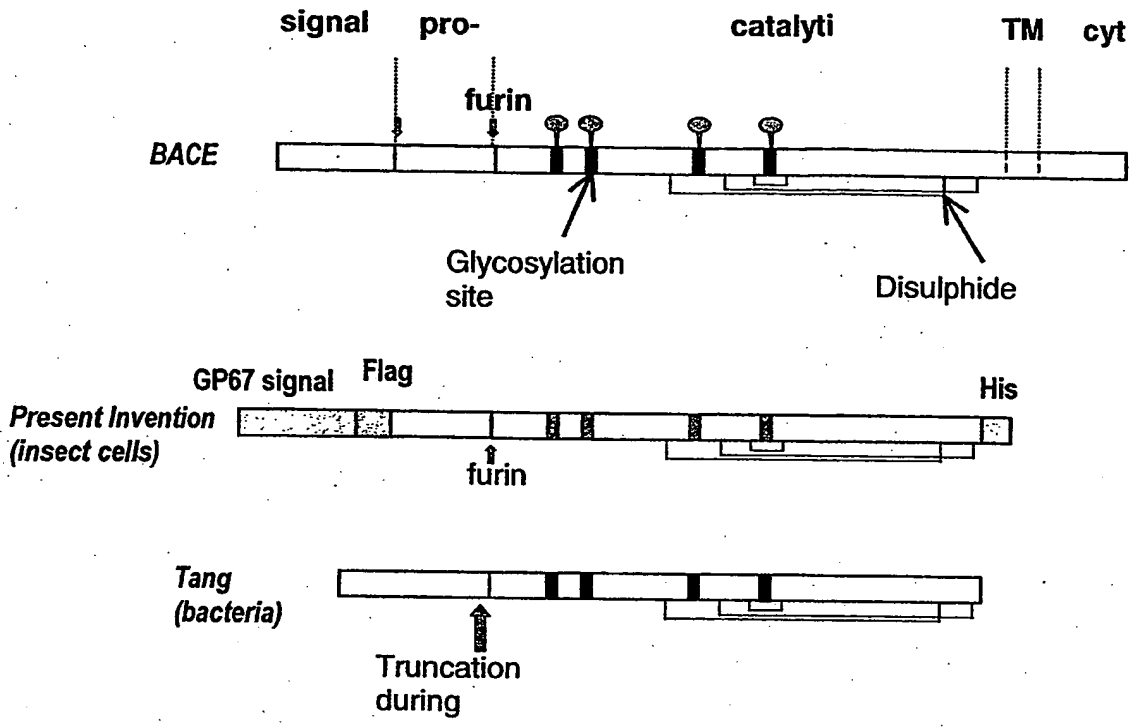
FIG. 5.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furin
Tang (bacteria)
Truncation during

FIG. 6.

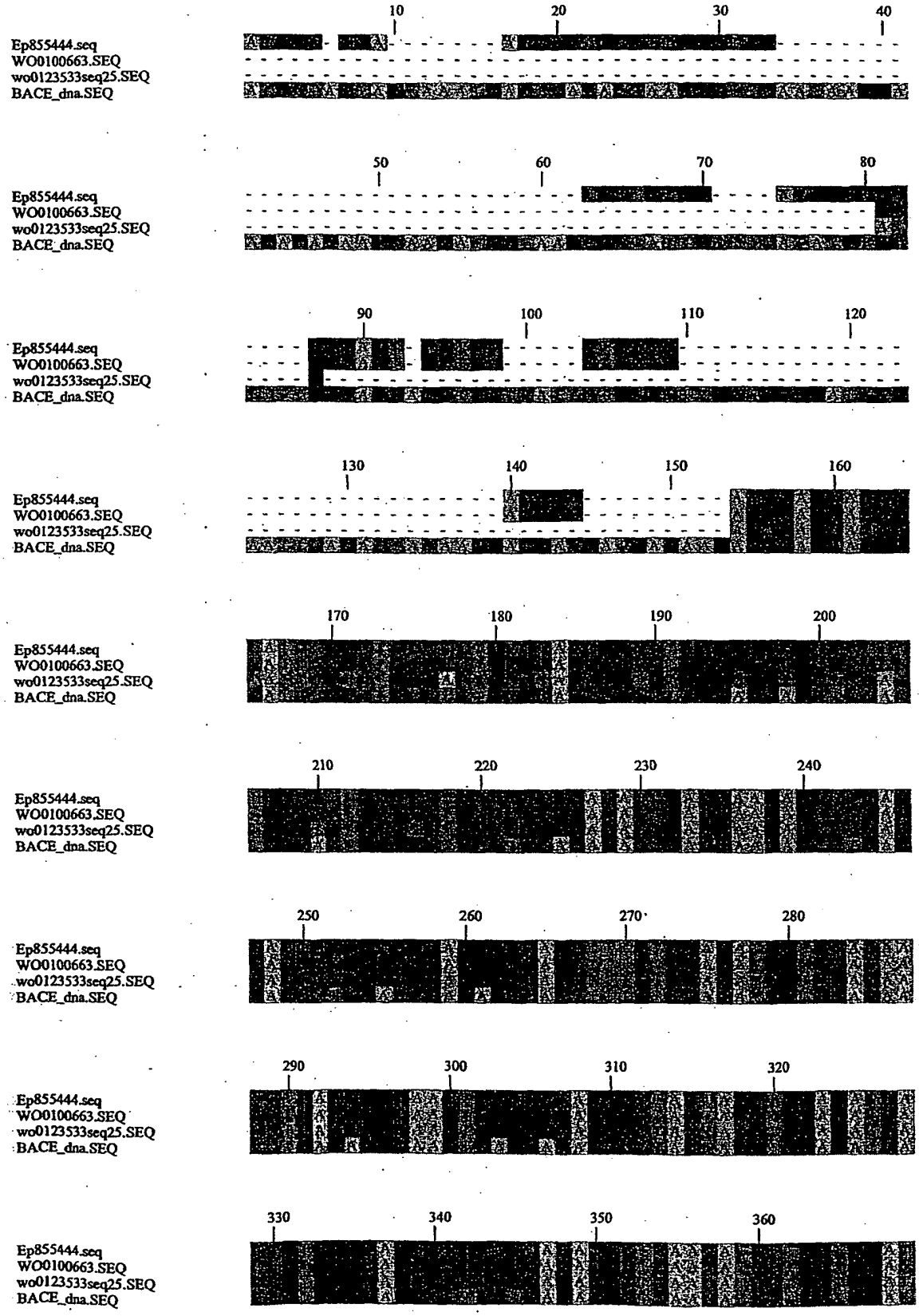
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FIG. 7.

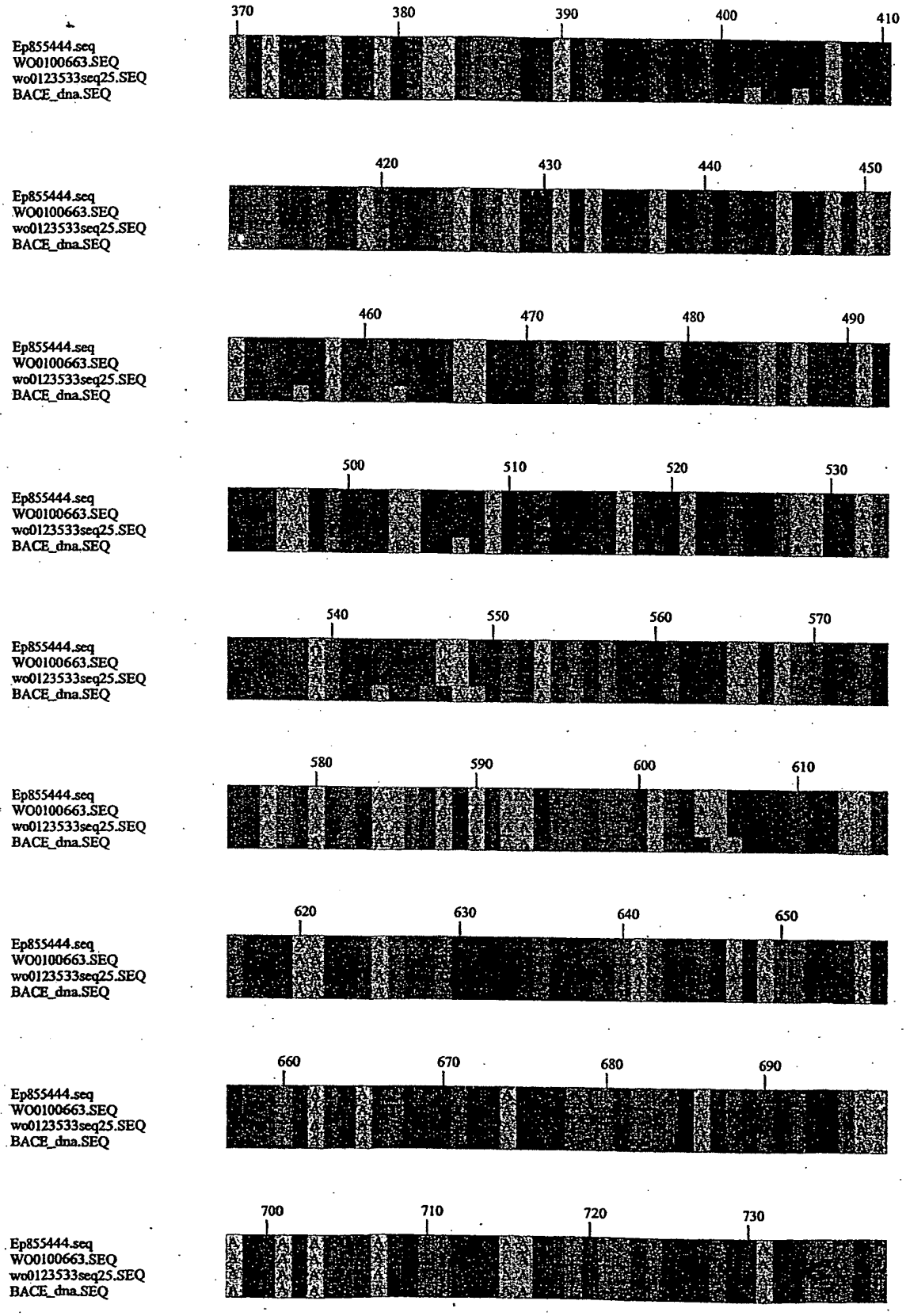

FIG. 7 (CONTINUED 1).

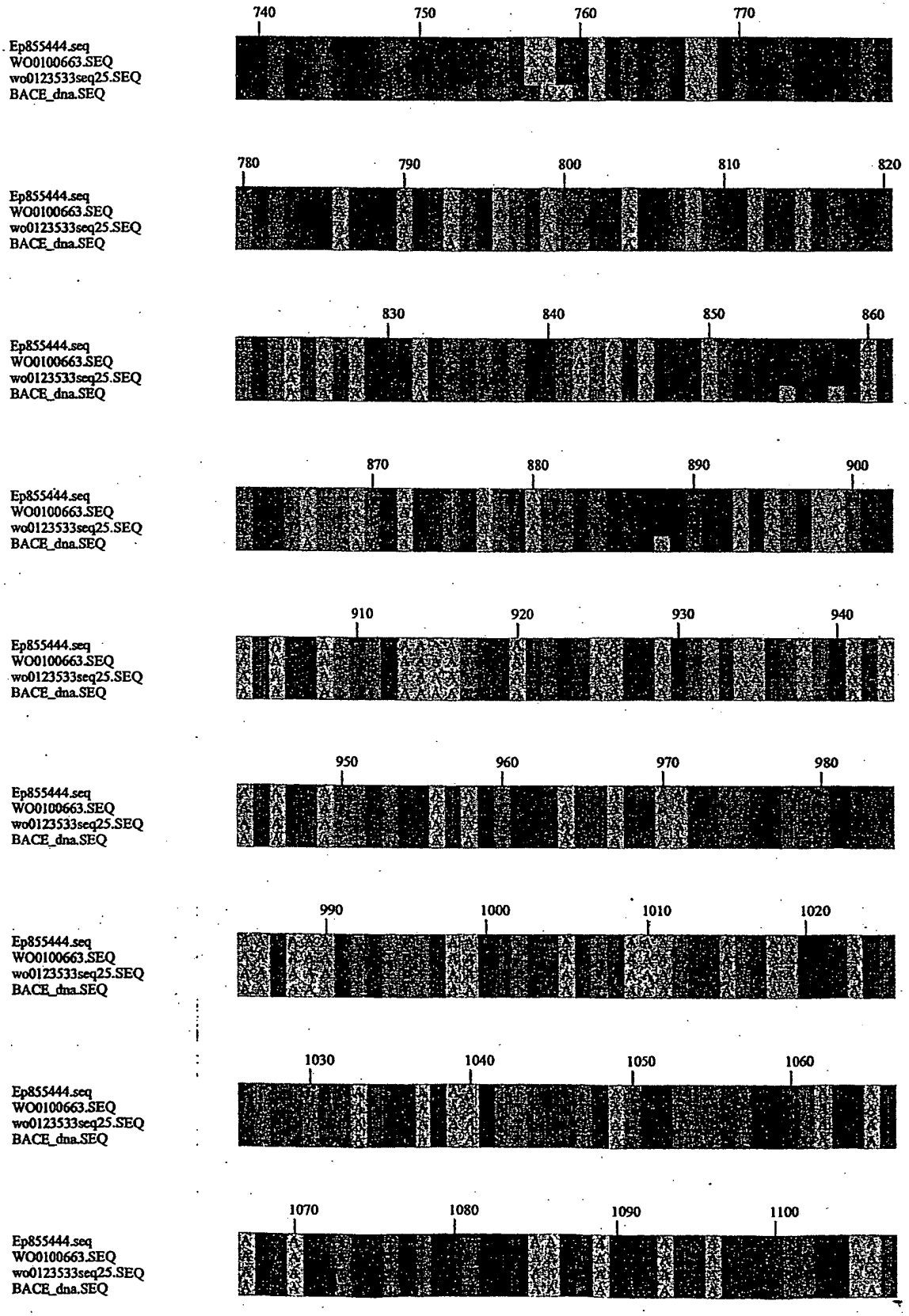

FIG. 7 (CONTINUED 2).

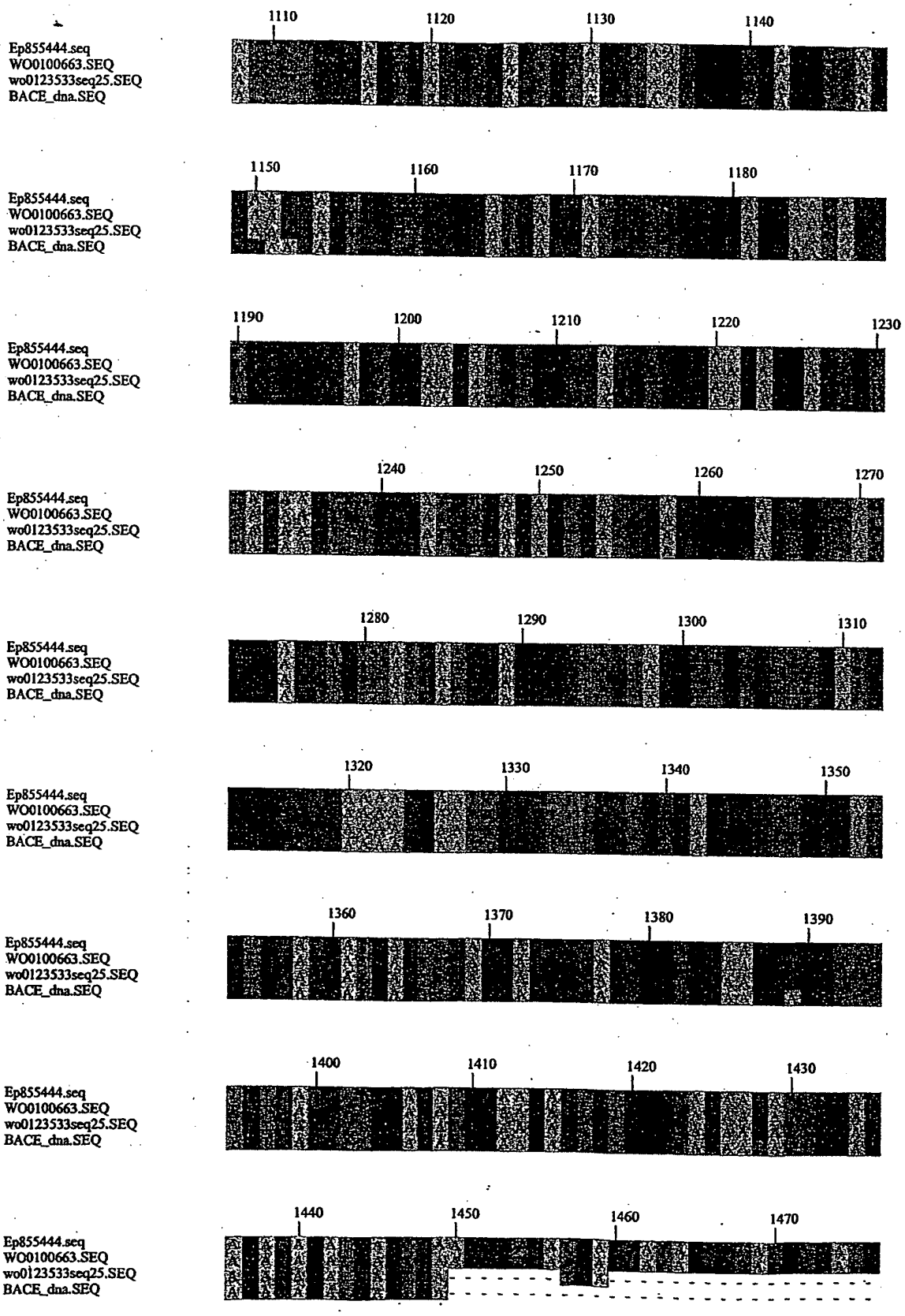

FIG. 7 (CONTINUED 3).

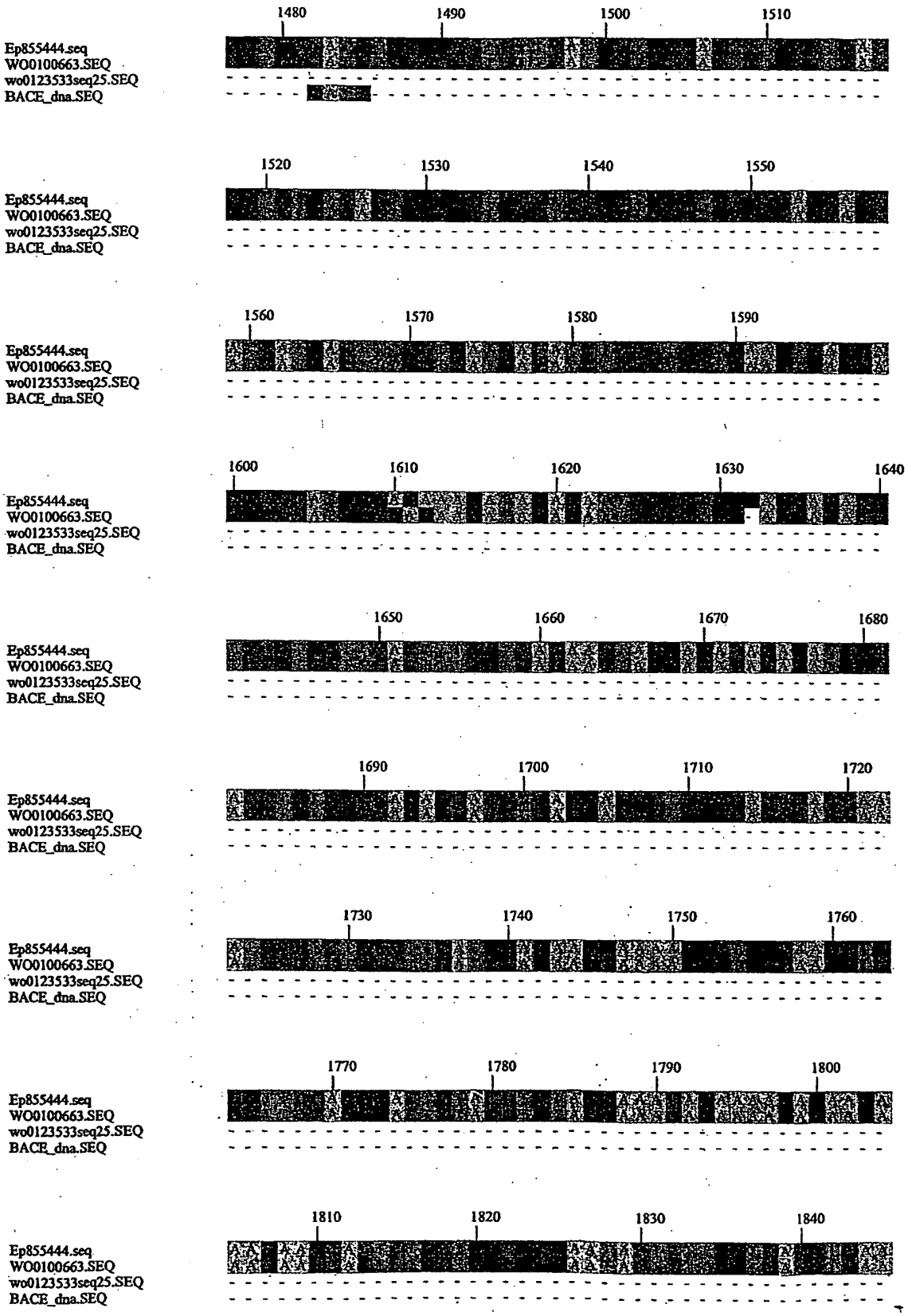

FIG. 7 (CONTINUED 4).

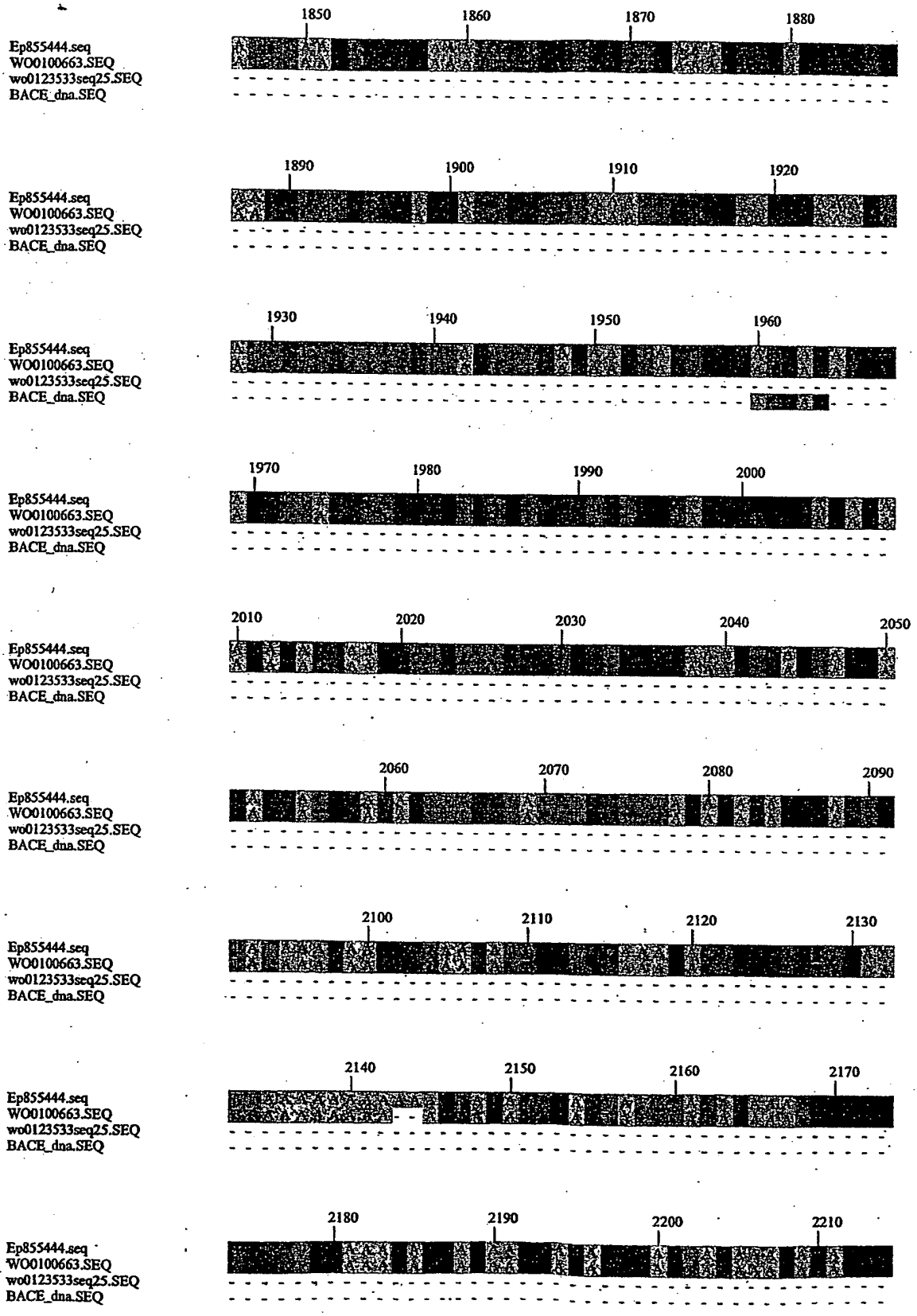

FIG. 7 (CONTINUED 5).

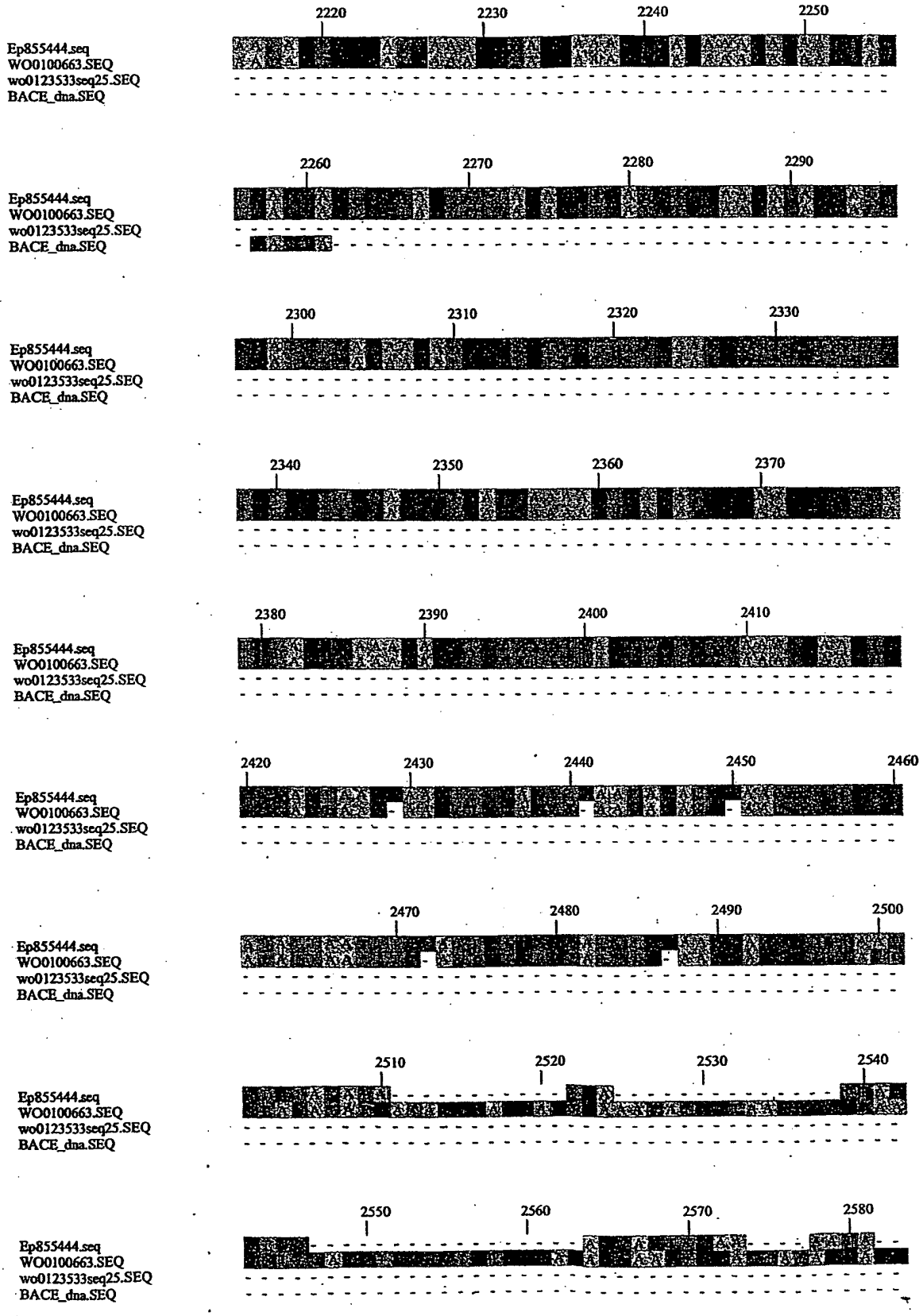

FIG. 7(CONTINUED 6).

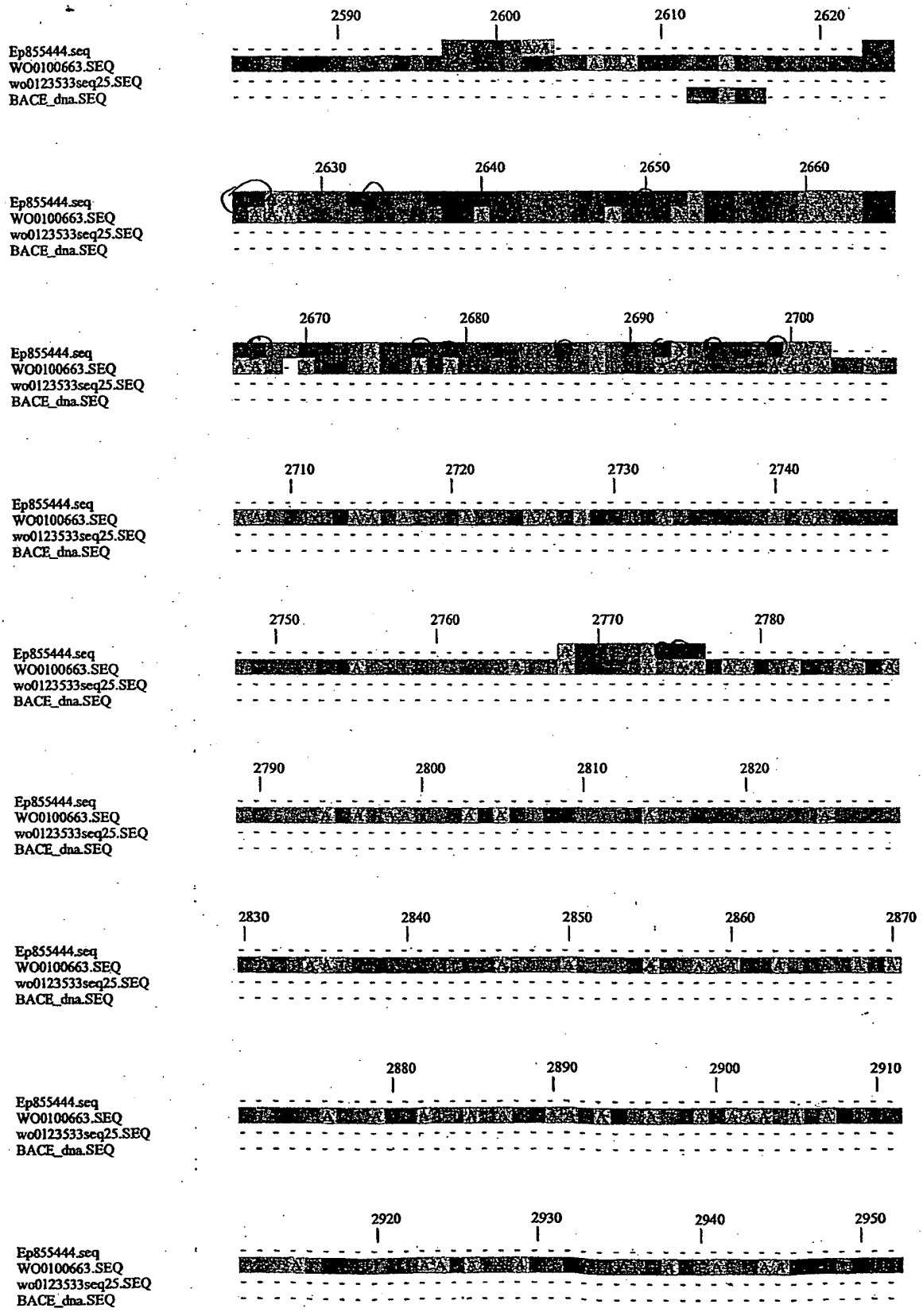

FIG. 7(CONTINUED 7).

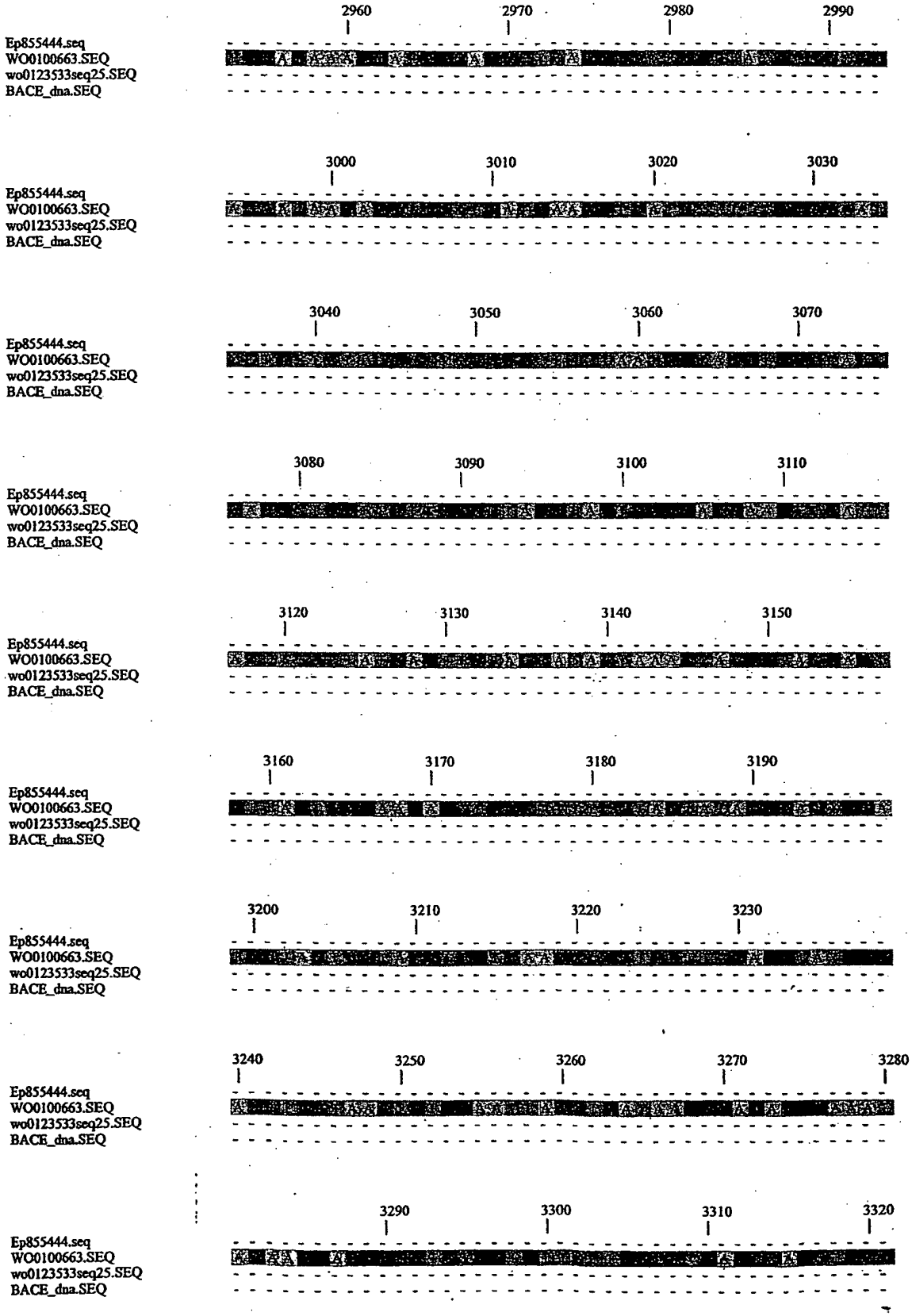

FIG. 7(CONTINUED 8).

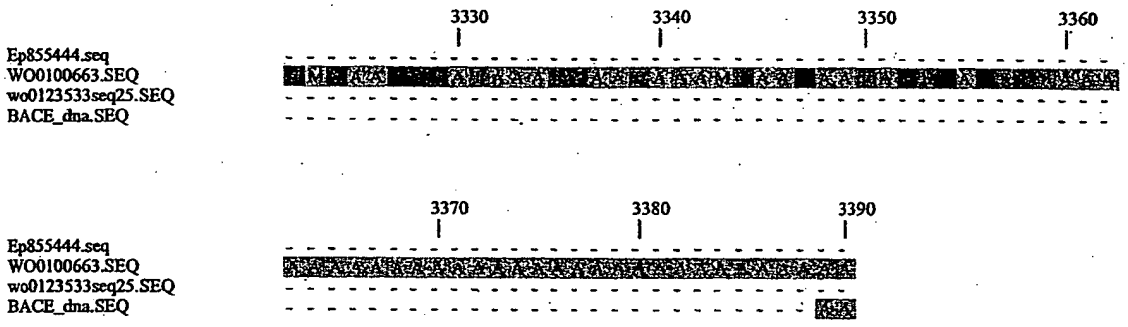

FIG. 7 (CONTINUED 9).

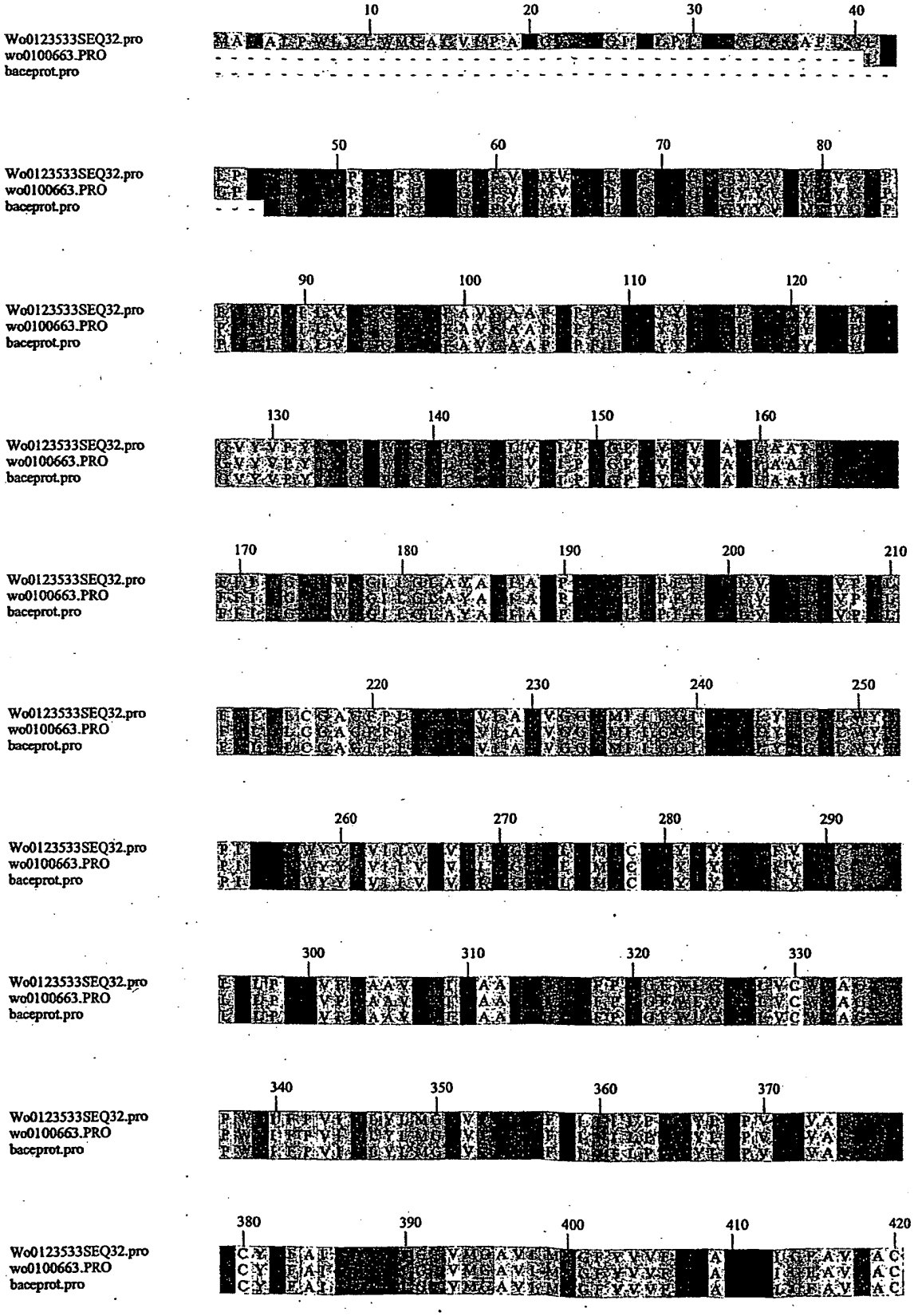
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FIG. 8.

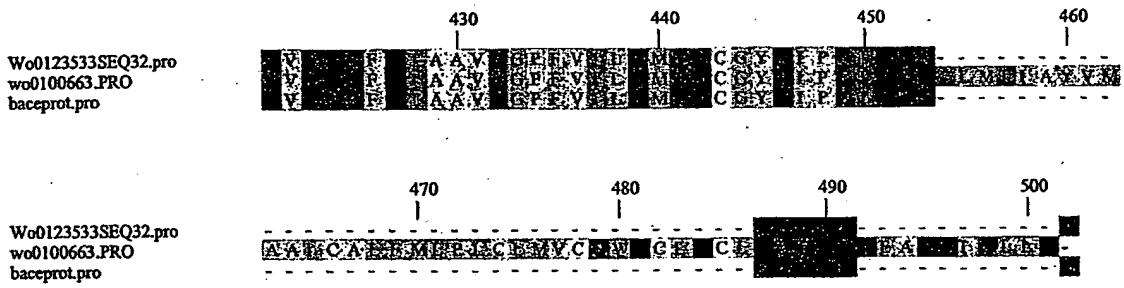

FIG. 8 (CONTINUED).